UNIVERSITY OF BRITISH COLUMBIA OKANAGAN MASTER PLAN

2009 UPDATE

PHILLIPS
FAREVAAG
SMALLENBERG

Stantec Architecture

Conceptual Rendering of University Centre

TABLE OF CONTENTS

EXECUTIVE SUMMARY i

BACKGROUND + INTRODUCTION 1

CONTEXT OF THE CAMPUS PLAN 4

PLANNING + DESIGN PRINCIPLES 6

THE MASTER PLAN 2009 - 2020 11

- MASTER PLAN FRAMEWORK 11
- PRECINCTS 16
- KEY PLAN TO BUILDING USE 19
- KEY PLAN TO LANDSCAPE + SITE PROJECTS 21
- PLAN DIRECTIONS 23
  - Perspective Views 25
- GENERAL GUIDELINES 28
  - Urban Design 28
  - Architectural 28
  - Landscape 28
  - View Preservation 29
  - Sustainability 29
- BUILDING DIRECTIONS 31
  - Learning Commons (Building A) 31
  - Health, Wellness and Recreation (Buildings H1, H2 and H3) 32
  - Lecture Theatre / Drama Centre (Buildings I and J) 33
  - Residences around the Commons (Buildings N, O and P) 34
  - Okanagan Centre (Building W) 36
  - Build-to Lines 37
- LANDSCAPE DIRECTIONS 39
  - Streetscapes 39
  - Courtyards and Plazas 40
  - University Centre 41
  - Circulation Network Hierarchy 45
- SUSTAINABLE BUILDING + SITE INITIATIVES 46
- PARKING 46
- STUDENT RESIDENCES 49

POST 2020 PLAN 50

IMPLEMENTATION OF THE MASTER PLAN 52

EXECUTIVE SUMMARY

The 2009 Master Plan for the UBC Okanagan campus guides physical growth and change on the campus lands through the year 2020 and beyond. This plan has been largely based on, and updates, the preceding 2005 UBC Okanagan Master Plan.

The original 2005 UBC Okanagan Master Plan was developed to guide the transformation of the lands from their former use as the North Kelowna Okanagan University College campus of 2500 students into a new UBC Okanagan campus for a projected population of 7500 students by 2010. That original plan process involved extensive consultation with the campus community and other stakeholders, the preparation of a set of Planning and Design Principles, and structuring the physical form of an academic Master Program for the next phases of campus expansion to 2010. It was grounded in the principles and strategies of the University of British Columbia, especially TREK 2010 and TREK 2000, and in the aspirations and directions of the Academic Plan for UBC O. These policies and values continue to inform the 2009 Update of the Master Plan as do the previously endorsed Planning and Design Principles.

The need to update the plan arose from significant changes to the road and access network serving the University and the implementation of new building projects that resulted in some footprint changes to earlier concepts. The development of the 2009 Plan has been directed by the staff of UBC Campus and Community Planning and a Steering Committee with representation from a range of key campus stakeholders. During the timeframe of the Plan's preparation, the City of Kelowna approved the zoning by-law for the University of British Columbia Okanagan. The Plan is generally consistent with the zoning and other policies and plans of the City of Kelowna. The Plan addresses projected development requirements on campus through 2020.

Precincts of the Master Plan

The Campus Plan defines seven precincts with distinct roles and characters:

The Core: The compact heart of the campus centred on University Way, the main entry route onto campus. A concentration of academic buildings rings the existing campus buildings on the south side of University Way with a variety of indoor and outdoor social spaces. North of University Way is the University Centre, the co-location of many facilities in the Master Program that generate campus-wide activity, both day and night, and invite use by the surrounding Okanagan communities.

The Commons: A large open lawn for the informal enjoyment of everyone on campus with its edges defined by buildings except on the east side where panoramic views of the valley are featured.

Winter View from the Commons

Health, Wellness and Recreation: Indoor and outdoor recreation facilities are integrated with synergistic academic programs including Social Work, Nursing, Psychology, and Human Kinetics and the new distributed Health Sciences.

Okanagan Landscape: The precinct between the Core and Highway 97 slopes to the east and encompasses grassland, pine forest, and wetland landscapes that speak of the Okanagan's character. These landscapes provide a sense of place to the experience of moving up the hill of University Way and a setting for gateway buildings and parking lots.

Hilltown: The hill is the site of existing and future residences and enjoys proximity to the core and spectacular views.

Pine Forest: The existing pine forest is not needed for implementation of the Master Plan to 2020 but may be considered for longer-term development. This area is now starting to suffer from pine beetle infestation, and diseased wood must be removed due to fire hazard. Replanting strategies in this part of campus will also be explored as the forest declines.

University Reserve Lands: The lower bench along the highway is anticipated to develop in the coming years and to respond to the airport-related private Gateway development to its north with research, high tech, and commercial uses.

BACKGROUND + INTRODUCTION

In 2005, a Campus Master Plan was prepared to address the transformation of the previous north campus of Okanagan College into the University of British Columbia Okanagan. This Plan reflected the final Master Space Program prepared by RPG Resource Planning Group Inc. and the Academic Plan that underlaid the Space Program.

Stage One of the Campus Master Plan commenced in March 2005 with a series of workshops and stakeholder meetings with the Steering Committee and Project Team. Stage One was concurrent with the preparation of the Space Master Program process and, therefore, focused on a review of background information, site inventory and assessment, and consultation with the campus community and other stakeholders. Several workshops were held with stakeholders and the City of Kelowna to consider opportunities for the Master Plan with respect to: integration with the surrounding community, transportation and transit access, potential sustainable best practices, and directions and expectations from the Academic Plan. A set of preliminary Planning and Design Principles were drafted to reflect the results of Stage One and for use in consultation during Stage Two.

Stage Two was initiated when the draft Space Master Program became available. An intensive series of workshops with the Steering Committee and Project Team developed a conceptual plan for UBC Okanagan that was consistent with the space requirements for campus expansion to 2010 for 7,500 students (FTE). An extensive round of consultation was then undertaken to review the preliminary Master Plan and the Draft Planning and Design Principles that had been used in its development. Both the Principles and the conceptual framework were widely endorsed through this process. Based on the physical planning framework developed in Stage Two, a location and conceptual plan for the first academic building, the Multipurpose Building (E), was determined for presentation to the Board of Governors.

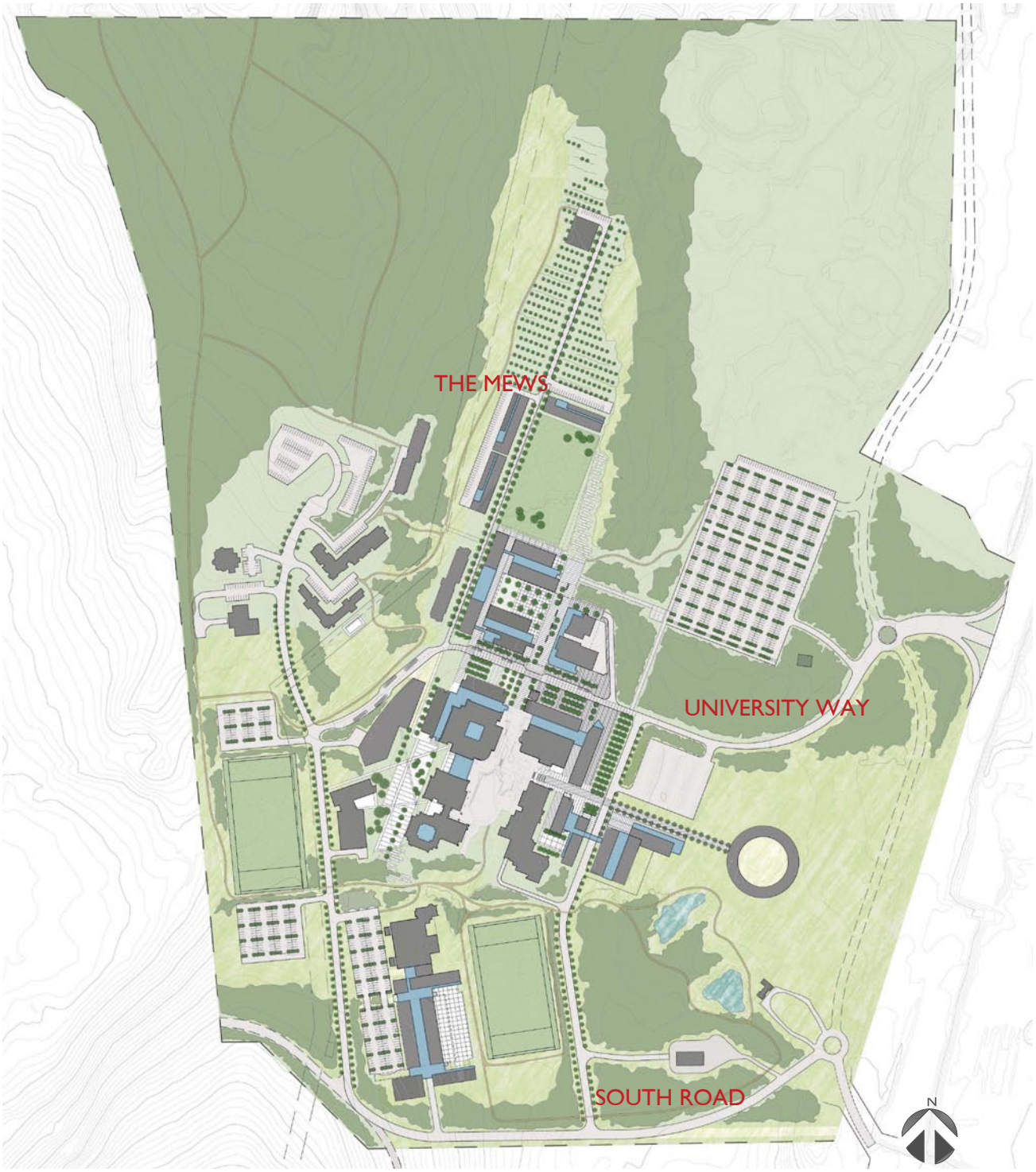
Stage Three evolved and refined the Master Plan. The final Space Master Program reflected an increased proportion of students in the sciences than had been projected at first. As a result, several new buildings were added to the Master Plan. Through several iterations of the Plan, preliminary phasing and cost estimates were prepared and an understanding of funding sources and year-by-year demand for program space was clarified. The Project Team has also prepared projections and diagrams that test the resilience of the Master Plan to accommodate post 2010 expansion while retaining its commitment to the Planning and Design Principles.

After the Planning Principles and physical framework of the Campus Master Plan had been confirmed by the Steering Committee, further refinement was undertaken as Stage Four to reflect comments received through consultation with the Steering Committee and campus stakeholders and the evolving understanding of campus requirements.

Stage Four included preparation of a three dimensional Demonstration Plan and Design Guidelines.

The Master Plan process involved a review of City of Kelowna plans and policies and discussions with senior departmental staff to place the development of the University of British Columbia Okanagan into the context of its surroundings and plans for their future use and development. In 2008, the campus received a rezoning based on the Campus Master Plan with a number of changes, especially to the road network.

Conceptual and planned road prospects were a key reason for initiating a revision of the 2005 Master Plan in 2009. The completion of several building projects and detailed design development of others have also resulted in the need to update the earlier Master Plan.



2005 Master Campus Plan (now superseded by 2009 Update, see p. 5)

ACKNOWLEDGEMENTS

2005 MASTER PLAN

PROJECT TEAM
Greg Smallenberg, Phillips Farevaag Smallenberg
Marta Farevaag, Phillips Farevaag Smallenberg
Jennifer Nagai, Phillips Farevaag Smallenberg
Alison Maddaugh, Phillips Farevaag Smallenberg
Bruce Kuwabara, Kuwabara Payne McKenna Blumberg
Tom Payne, Kuwabara Payne McKenna Blumberg
Brian Christianson, Stantec Architecture
Jim Kentel, Stantec Consulting
Dave Cullen, Stantec Consulting
Steve Woodmass, Stantec Consulting

STEERING COMMITTEE
Aidan Kiernan, AVP Operations, UBC Okanagan
Moura Quayle, Dean, Faculty of Agricultural Sciences, UBC Vancouver
Catherine Alkenbrack, Manager, Space Administration & Planning, UBC Vancouver
Joe Stott, Director, Campus and Community Planning, UBC Vancouver
Ruby Theilmann, UBC Okanagan Project Director
Karly Henney, Planner, Campus and Community Planning, UBC Vancouver

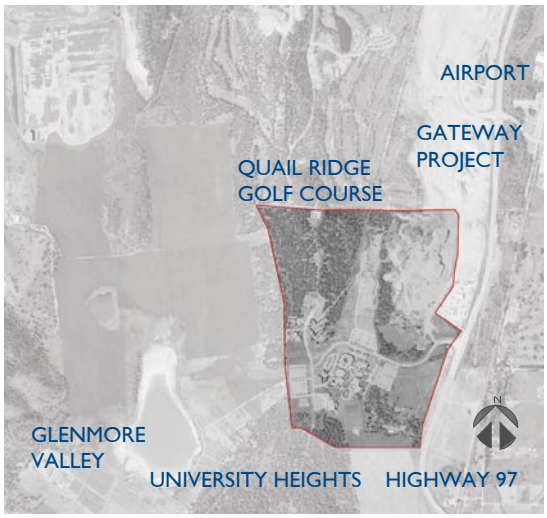
EXECUTIVE SPONSORS
Barry McBride, Deputy Vice-Chancellor, UBC Okanagan
Dennis Pavlich, VP External and Legal Affairs, UBC Vancouver

2009 MASTER PLAN

PROJECT TEAM
Marta Farevaag, Phillips Farevaag Smallenberg
Jennifer Nagai, Phillips Farevaag Smallenberg
Nathan Brightbill, Phillips Farevaag Smallenberg
Xenia Semeniuk, Phillips Farevaag Smallenberg
Stephanie Redlich, Phillips Farevaag Smallenberg

STEERING COMMITTEE
Nancy Knight, AVP Planning, Chairperson
Aidan Kiernan, AVP Operations Okanagan Campus, UBC O Staff Representative
Scott Reid, Associate Professor, UBC O Senate Representative
Ian Cull, AVP Students, UBC O Student Representative
Lisa Colby, Manager Policy Planning, Campus & Community Planning
Rob Brown, VP Institutional Development, UBC Properties Trust
Dave Lubbers, Student Representative
Bernard Bauer, Dean Arts and Sciences, UBC O Representative
Gerry McGeough, University Architect, Campus & Community Planning

The Master Plan process involved a review of City of Kelowna plans and policies and discussions with senior departmental staff to place the development of the University of British Columbia Okanagan into the context of its surroundings and plans for their future use and development. Campus expansion is consistent with the Kelowna Official Community Plan and received rezoning to a comprehensive zone that responds to the Master Plan in 2008.



Aerial Photograph of the Campus and its Context

Many of the land uses around the campus are on the threshold of major changes. The lands to the north of the main entry to the campus along the Highway 97 corridor are being planned to have light industrial, high tech, and service commercial uses, often related to the airport, and a hotel. These uses will replace the current sand and gravel extraction operations. This area has been studied as a joint project, termed the Gateway, with participation of the City of Kelowna, the airport authority, and affected landowners. Planned access improvements into these development sites include a grade-separated interchange at the airport and the extension of Hollywood Road northward to this interchange. Hollywood Road will also serve to provide collector road access to the land owned by UBC O at the northeast corner of campus that has been leased for gravel and sand operations but with significant potential for future research-related development.

A new access to the campus at the southeast corner of the campus has been built to mitigate congestion problems at the previous main gateway to campus.

The forested ridge adjacent to the southwest corner of the campus is the site of University Heights, a comprehensive redevelopment that includes residential and commercial land uses.

The campus is bordered by land in the Agricultural Land Reserve both on the south, between University Heights and the highway, and along most of its western boundary. The ALR lands to the west of campus are a mix of both small and large holdings. UBC O is exploring acquisition of some of these sites for research uses and other campus-related activities that are compatible with the ALR designation and its agricultural character.

The north side of campus is edged by the Quail Ridge development and golf course. Its phased development is underway and new construction is occurring near the campus boundary. A regional trail links the north campus to Quail Ridge but there are no vehicular connections.

2009 Campus Master Plan

PLANNING + DESIGN PRINCIPLES

During the initial stages of the 2005 Master Plan process, a review of policies and previous plans was undertaken, including the TREK 2010 and TREK 2000 documents of the University of British Columbia and the Academic Plan for the University of British Columbia Okanagan. Workshops were held with a wide range of stakeholders to discuss their hopes and aspirations for the Master Plan. From these sources, a set of Planning and Design Principles were drafted and then reviewed and revised during the consultation process. The consolidated Planning and Design Principles were well supported by stakeholders and provided clear direction for the preparation of the Master Plan.

These Principles were reconfirmed in the consultation process for the 2009 Update and continued to provide the framework for plan revisions.

PRINCIPLE 1:

Provide a Hierarchy of Outdoor and Indoor Social Spaces that Encourage Social Interaction

Implications:

- Provide a mix of open, shaded, and covered open space suited to the seasons and the Okanagan climate
- Make each space contribute to a sense of place and of belonging to the UBC Okanagan community
- Promote numerous impromptu and casual contacts among students, faculty, and staff from all courses of study and parts of campus
- Create a range of spaces, with appropriate landscape characters and programming, that act as an interconnected system to produce " a whole that is greater than the sum of its parts": a central 'commons'/gathering place, major courtyards defined by academic buildings, minor courtyards within academic buildings as sources of light and air as well as places for rest and study, social spaces defined by residential buildings, movement corridors, and passive landscapes as edges and buffers

PRINCIPLE 2:

Ensure Comprehensive Universal Access

Implications:

- Integrate universal access wherever possible with a goal of full accessibility within buildings and throughout the landscape
- Review site and buildings on the current campus to determine where modifications would be required to achieve this objective

PRINCIPLE 3:

Work within Financial Realities

Implications:

- Balance the desire for economical initial construction costs with the value of high quality buildings with low life-cycle costs
- Support sustainable objectives and permanent buildings that are flexible and adaptable to changing use
- Foster mixed use buildings that include services like coffee shops and copy centres
- Consider partnerships and sponsorships with the City of Kelowna and the private sector
- Ensure that the needs of conference and meeting users are part of the design of residences, food services, and social spaces

PRINCIPLE 4:

Plan for Landscape Development in the Budgeting Process

Implications:

- Ensure that the budget for campus development has landscape as a category

PRINCIPLE 5:

Give Physical Expression of the Planning Principles of BC TREK 2010, UBC Okanagan Academic Plan, and UBC TREK 2000

Implications:

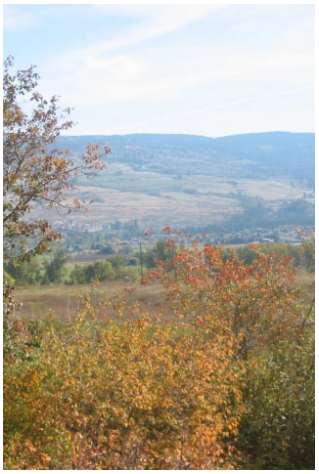
- Ensure that the visions in the Academic Plan are matched by the physical expression of campus development
- Consult with the people who shaped the Academic Plan during the Master Plan process
- Review the evolving Master Plan regularly in reference to UBC policies

PRINCIPLE 6:

Integrate the Campus into the Iconic Okanagan Landscape

Implications:

- Protect much of the existing pine forest stands and a significant portion of the grass benchlands and make them available as a teaching resource
- Provide a network of trails through the campus landscapes, and connecting to the regional trail system, as an amenity to campus life
- Recognize and utilize at the appropriate elevations the three generic Okanagan landscapes: pine forest at the hilltops, grassland on the hillsides, and intensive land use on the valley floor
- Advocate strategies to naturalize damaged grassland and to sustain existing stands of Ponderosa pine
- Select plants that are characteristic of the Okanagan and suited to low maintenance and low use of water for irrigation
- Support the continued viability of adjacent agricultural lands for their value as a landscape setting for the campus and their potential as a learning environment



PRINCIPLE 7:

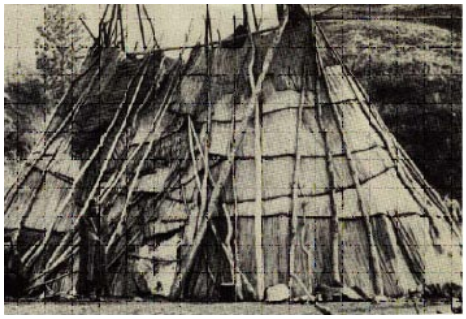
Protect and Expand the Campus Land Base for Long-term Growth

Implications:

- Envision the long range future of the campus, while focusing on the short-term timeframe, to avoid the preemption of opportunities
- Consider opportunities for partnerships and academic activities on the Agricultural Land Reserve to the west and possibly to the south of the campus
- Plan road access to minimize the introduction of barriers to movement, especially for pedestrians
- Strategize to reduce the site area occupied by surface parking over time
- Consult with the City of Kelowna and other potential partners on shared off-campus recreational, cultural, and continuing educational facilities

PRINCIPLE 8:

Represent the Aboriginal People's Historical Connection to the Land



Implications:

- Create a Gathering Place on campus that is structured around historic Okanagan Nation tradition
- Reflect the traditions of seasonal land use and plants with ethnobotanical values in the campus landscape

PRINCIPLE 9:

Demonstrate Sustainable Best Practices

Implications:

- Plan for the use of geothermal heating and cooling, including the retrofitting of existing buildings and the eventual removal of the current heating plant structure
- Explore the feasibility of a Living Machine for sewage treatment
- Manage on-site stormwater through surface features integrated into the design of streetscapes and landscapes
- Make sustainable features visible and available as learning and teaching opportunities
- Optimize passive solar opportunities
- Consider landscaped green spaces on structure and roofs as integral parts of the campus landscape
- Endeavour to build structures for permanence and quality as well as flexibility to adapt to changing program requirements over time in order to demonstrate resource efficiency

PRINCIPLE 10:

Integrate Campus Development with its Neighbours to Ensure that All Okanagan Communities are Welcomed on Campus

Implications:

- Buffer adjacent ALR in keeping with City of Kelowna policies
- Plan cooperatively with the City of Kelowna to share recreational and cultural facilities
- Provide effective, direct road and trail access to the Glenmore Valley and the Glenmore Highlands communities

PRINCIPLE 11:

Co-locate New Recreational and Cultural Facilities on Campus in an Area that is Recognizable as a Campus Precinct and Convenient to the Surrounding Community

Implications:

- Provide access for shared use by the Okanagan community, Kelowna citizens, and more specifically Glenmore Valley residents
- Ensure that any roadway access and event parking has been considered in proximity to any community oriented facilities in a manner that does not negatively impact the campus

PRINCIPLE 12:

Locate New Research Facilities toward the Northeast Quadrant of Campus to Anticipate Links to Private Research, High Tech, and Related Commercial Development in the Vicinity of the Airport Gateway

Implications:

- Coordinate development plans with City, Airport, and private landowners to create strong links between the campus and adjacent development
- Strive for a shared intention to achieve shuttle, pedestrian and cyclist routes that will connect the airport to the campus core through new development
- Seek opportunities to share parking on adjacent private lands as an alternative to building more parking on campus
- Encourage the development of commercial services immediately off-campus that will supplement the ancillary services available on campus to provide greater choice for the campus community and to reduce the use of vehicles for shopping and entertainment trips

PRINCIPLE 13:

Co-locate the New Student Services Building and Other Campus Social Facilities to Maximize Synergies among Activities

Implications:

- Locate the student services building as an edge to an important social space and program the space to support student lead activities, events, and celebrations
- Consider the suggestions generated by the campus life mini-project

PRINCIPLE 14:

Define, Protect, and Manage Key Views

Implications:

- Identify, map, and protect the most significant view corridors
- Orient buildings to frame views with deliberation within the landscape
- Consider views and vistas to key campus buildings as part of the entry sequence
- Incorporate a vertical element as a landmark with long-distance views towards the campus

PRINCIPLE 15:

Utilize a Palette of Local and Appropriate Materials and Site Furnishings to Unify the Campus

Implications:

- Develop a palette of materials that is coherent with the existing OUC buildings on campus while expressing a new, contemporary aesthetic for UBC Okanagan
- Review the original decision to select dark red brick as an authentic material from and for the Kelowna region by recommending use, in varying degrees, on future buildings
- Develop a language of design for site furniture that spans the entire campus linking the interconnected network of open spaces

PRINCIPLE 16:
Strive for Light and Transparency

Implications:
- Create more ground floor transparency along building edges
- Integrate indoor and outdoor spaces, especially communal amenity spaces
- Consider light within and around buildings as part of the strategies for wayfinding and safety and security
- Maximize natural daylight for liveability and to limit use of energy
- Consider the quality of light within all important campus open spaces throughout various times of the day

PRINCIPLE 17:
Provide for Public Art, Community Events, and Commemorations

Implications:
- Use places and place names to commemorate and interpret local history and people important to the campus as it develops
- Encourage displays of art and other work by the campus community throughout indoor and outdoor communal spaces
- Create spaces that accommodate community events at the small and large scale

PRINCIPLE 18:
Place Buildings to Create the Edges of Open Spaces

Implications:
- Establish an open space framework defined by existing and future building footprints
- Use the placement of buildings to reinforce strong visual and pedestrian axes

PRINCIPLE 19:
Orchestrate an Aesthetic and Welcoming Entry Experience onto the Campus from All Entry Points

Implications:
- Design landscape "thresholds" in order to make the experience of moving into the campus expressive of the Okanagan landscape and to initiate the sense of place of UBC Okanagan
- Structure the streetscape design to provide wayfinding information and reduce the need for extensive signage
- Work with the MoT to ensure that the new access from the highway achieves a powerful entry experience into the campus

PRINCIPLE 20:
Integrate and Upgrade Campus Assets

Implications:
- Review existing campus buildings, grounds, and infrastructure to identify opportunities for reinvestment and redesign required to meet the policies, principles, and vision for UBC Okanagan.

MASTER PLAN FRAMEWORK

The framework of the Master Plan responds to a number of planning and urban design considerations as well as to the Planning and Design Principles adopted through the consultation process. An understanding of these aspects of the Master Plan is essential to its use and, especially, to its adaptation to changing requirements as UBC O responds to the interests of students, faculty, staff, and patrons.

Road Network Integration

Road access to the campus previously relied on the access from Highway 97 at University Way. A new road access has been implemented that creates a new entry at the southeast corner of campus and a connecting link that parallels the highway between this entry and the current one. This initiative has spread traffic between two entries from the highway and has mitigated past problems with queueing of vehicles turning left onto campus.

In the longer term, the Master Plan anticipates the potential for a road link to the west into the Glenmore Valley through the implementation of a new roadway along the south edge of the campus. This link is desirable for more direct access from north Kelowna and to provide access to the large recreational development planned by the City for the upper Glenmore Valley that will provide recreational opportunities for students, staff, and faculty of UBC O within a five minute drive or easy cycle from campus.

Pedestrian and Cycling Trail Integration

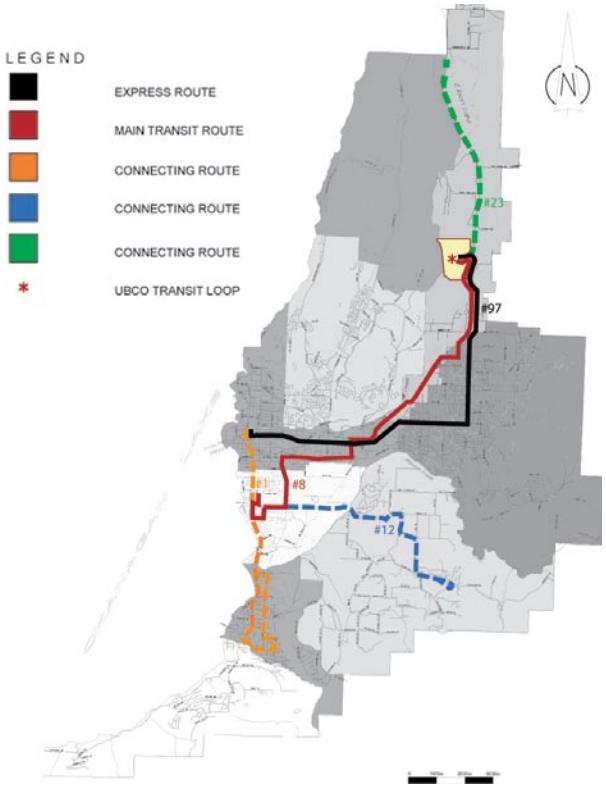
Improved accessibility by bicycle and on foot is part of the strategy to reduce car use and related demand for parking on campus. Trail links to campus from the west and south are currently being planned by the City of Kelowna. The Master Plan links to the Flume Trail along the northwest edge of campus and accommodates pedestrian movement with a variety of paved routes and informal trail loops. Cyclists are provided with space in the design of campus roads and with facilities for secure bicycle storage near academic and recreation destinations and within residences.

Transit Integration

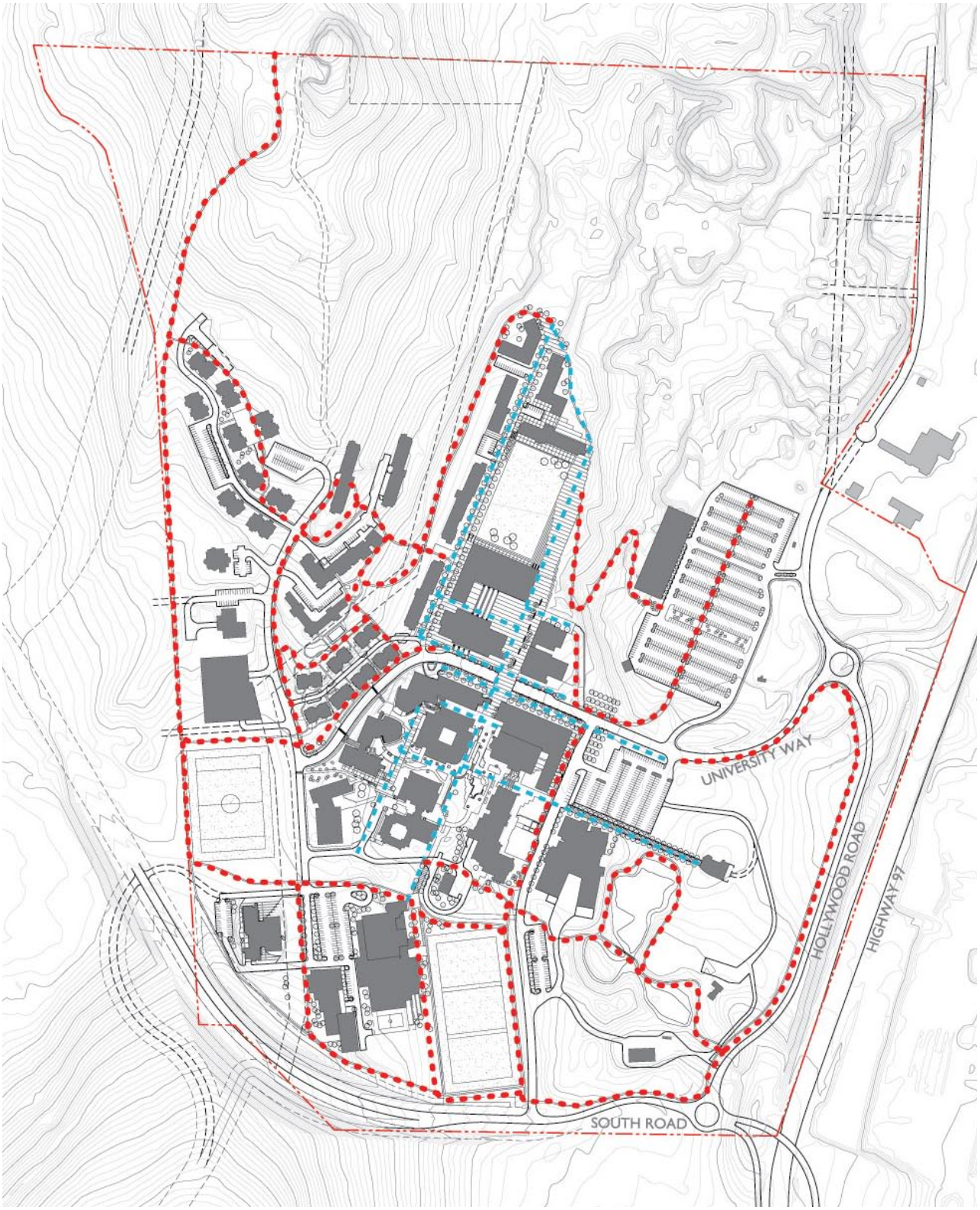
Over the next years, transit access to UBC O will expand significantly both within Kelowna and regionally. The Campus Plan proposes to accommodate buses on campus on the internal loop created by Hollywood Road, University Way, Alumni Avenue, and the completed segment of the Glenmore Connector. Buses arriving from Kelowna move around the loop in a counterclockwise direction and layover in front of the Student Services Centre. In the longer-term, buses will travel along the future Hollywood road extension when arriving from the north and will loop further into the heart of the campus along University Way when the Glenmore Connector becomes available to connect to the southwest corner of campus.

Provision of Parking

The current campus has a substantial amount of surface parking ringing the campus core and is largely a commuter rather than residential university. As the Master Plan is implemented, new buildings will occupy the sites of existing surface parking lots and trigger the construction of new parking in planned permanent locations.

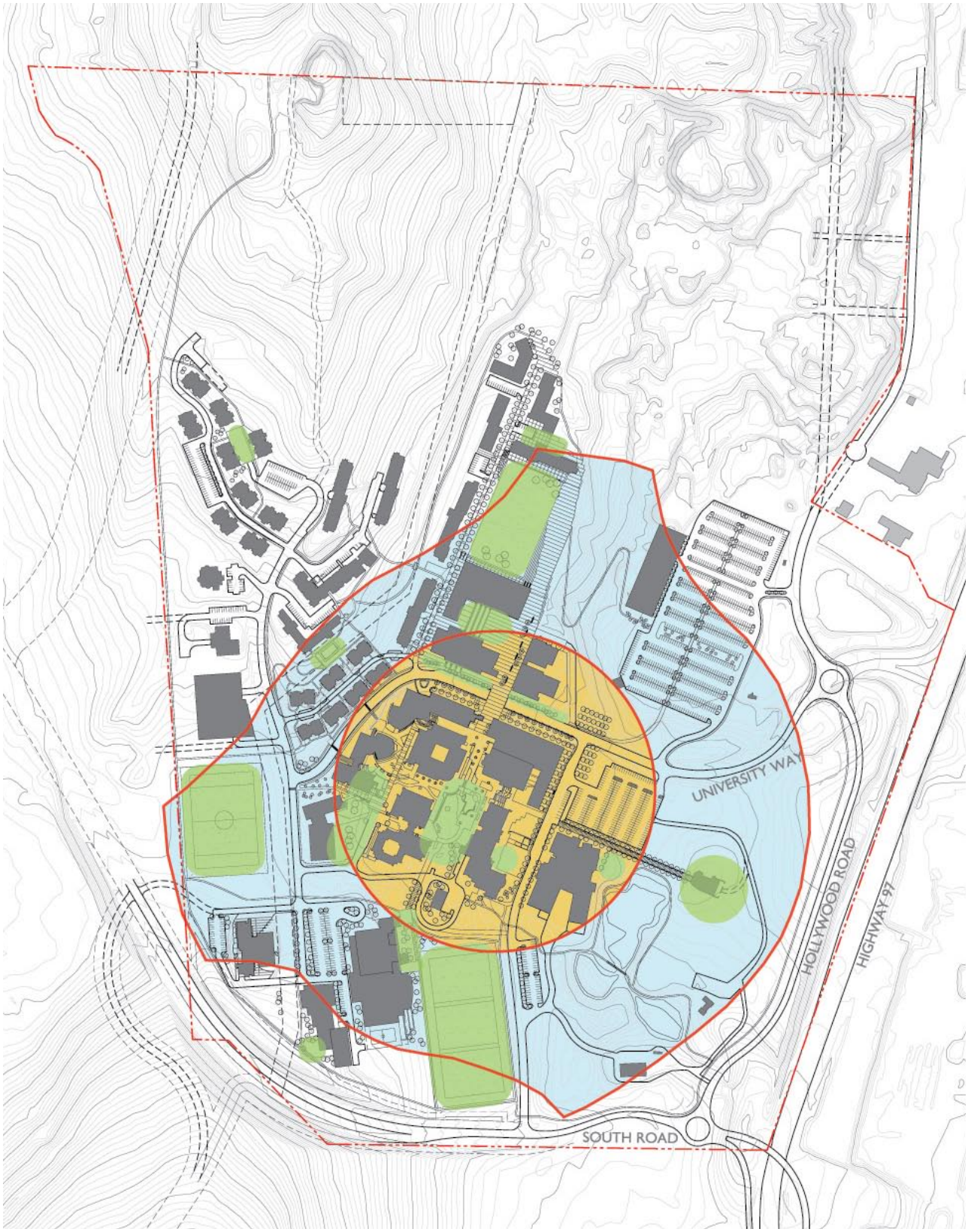


Existing Bus Routes



Campus Trail
University Walk

Trail Network



5 minute Walking Radius
2.5 minute Walking Radius
Social Spaces

Walking Distance

Most new parking in the short term will be in new surface lots located at the periphery of campus. Lot H is sited at an elevation where it is not in the foreground of important campus views due to the change in elevation between the Commons and Core Precincts and the level of this lot. In the longer term, structured parking is proposed to accommodate parking that is displaced as central, surface lots are used as building sites.

Topography and Aspect

The campus has a complex and varied topography. The intensive core occupies the relatively level central terrace. The sites for Health, Wellness, and Recreation and the University Centre, and the Commons to its north are higher than the elevations in the Academic Core. The Plan has identified strategies to ensure that universal access can be comfortably achieved throughout the central campus.

East of the core, the land slopes dramatically toward the highway; this change in elevation is intensified to the north of University Way where gravel and sand extraction has created an escarpment and an area that requires significant remediation before it will be suited to development. South of University Way, the slope is more regular. The Okanagan Centre (Building W) nestles into this hillside within an open grassland landscape that is iconic to the Okanagan. The new section of Hollywood Road occupies the toe of the slope near the highway where it has low visual impact on views from the upper terrace towards the valley.

The topography in the northwest quadrant of campus is a south-facing hillside rising to a summit at the north boundary of campus where the water reservoir has been built. This precinct, Hilltown, is planned as the focus of longer-term residential development that will readily take advantage of the south aspect for related landscaped social spaces.

Landscape Typologies

The campus represents a microcosm of the landscapes that are iconic for the Okanagan: development and a related manicured landscape on flat land, grassland on the lower slopes of the valley sides, and pine forest at higher elevations. The Master Plan seeks to reinforce this pattern with intensification of development on the flatter land, use of a sustainable native grassland landscape on sloping areas of the campus, particularly to create the entry experience from along University Way and an appropriate setting for the Okanagan Centre, and retention, at least within the 2020 time horizon, of the remnants of pine forest as a backdrop.

Integration with the Existing Campus

The structure of the campus inherited from the Okanagan University College is informed by a geometry and orientation for the Master Plan. The central courtyard is extended to the north as University Walk, the primary organizing spine of the Plan. The initial expansion of space for the first years of UBC O was achieved first through the addition of new floors to existing buildings in the core and then by new wings for the Science and Library buildings. These initial building expansion projects increased the scale of buildings defining the edges of the Central Courtyard and resulted in a stronger built form. The red brick that dominates the existing buildings continues to define the character of the Academic Courtyard and becomes an accent material for new structures.

Building Height Limitations

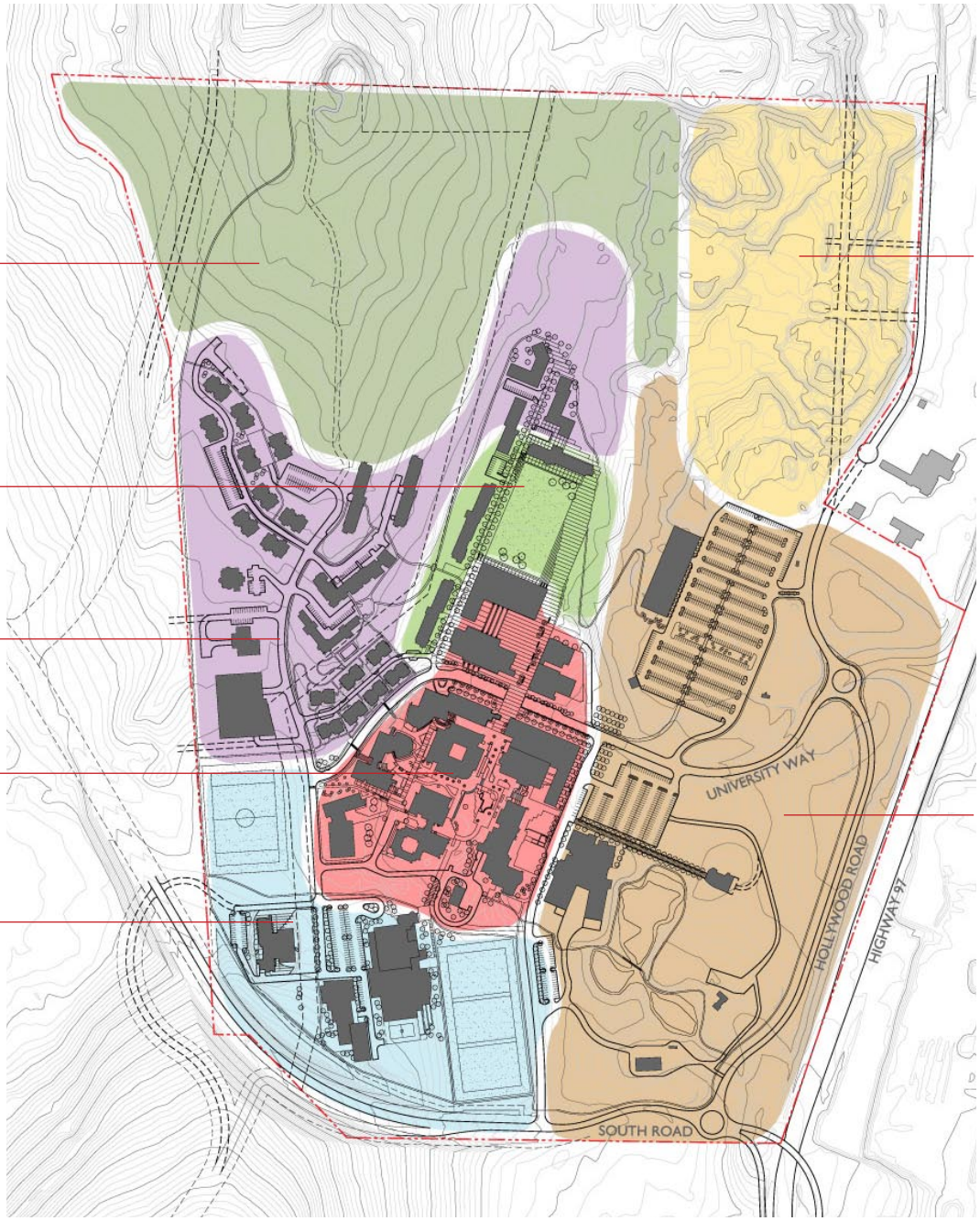
Transport Canada has an approvals role for buildings near airports that affects building heights on the UBC O campus. Although the potential for taller buildings is anticipated due to improvements in the technology of airplanes, the Master Plan has kept building heights within the limits that are currently understood to be acceptable to Transport Canada. These acceptable heights are reflected in the Campus Plan and its associated City of Kelowna zoning by-law.

View Opportunities

Spectacular views are available from a number of vantage points on campus. Capturing and framing these views and the phased relocation of surface parking outside of key view corridors has been a major determinant of campus form in the Master Plan process. Views into the agricultural land to the west are maintained from several academic and residential buildings by the placement of the new playfield within this view corridor. Buildings on the south side of campus will have panoramic views to the south over the upgraded playfield east of the gymnasium.

The University Centre and Learning Commons as well as the buildings around the Commons all have views over the valley to the east that will be enhanced in time by the relocation of parking to new sites outside of key view corridors. Design Guidelines for the protection of key views are found in the Guidelines section.

Major Views



LEGEND
- Pine Forest
- Hilltown
- Commons
- Core
- Health, Wellness and Recreation
- Okanagan Landscape
- University Reserve Lands

Campus Precincts

The Master Plan defines seven precincts, each with a characteristic mix of uses, building typology, and landscape. An eighth precinct, called the Productive Landscape, was previously part of the 2005 Master Plan and was located on an open, disturbed site that was not required for buildings at that time. It was identified as a suitable location for research fields for the Agroecology program and related academic research opportunities and greenhouses. This area will now be used for additional future student housing capacity. A continuing relationship to the iconic productive landscapes of the Okanagan can still be explored in future, with the possible future acquisition by UBC O of agricultural lands along the west boundary of campus for research purposes.

The Core Campus

The intensive heart of the campus is focused at the intersection of University Way and University Walk. South of University Way is a compact group of academic buildings organized around courtyards: the existing central courtyard and the new Arts and Sciences Courtyard. These buildings are largely three and four storey structures, often with atrium spaces offering social opportunities, weather protected circulation, and natural light penetration into building interiors. Building programs and social spaces encourage interaction and dialogue among students and faculty of all departments and move away from buildings dedicated specifically to arts or sciences.

The University Centre is located to the north of University Way and provides for the co-location of facilities and services used by everyone on campus and, in many cases, the surrounding community. The University Centre is intended to embrace a theatre for dramatic and musical productions, a future 400 seat lecture theatre, a variety of food and retail shopping opportunities, space to accommodate the needs of the Student Association, including a pub, as well as offices for student services and conferences, computer labs, meeting rooms, and other facilities. Planned to be built in two phases, the University Centre will, when completed, provide the animating edges of University Plaza, the primary social and event space for the campus community.

The Commons

This precinct is organized around the Commons, a large open lawn for the informal enjoyment of everyone on campus inspired by similar, well-loved greens at the heart of universities across North America. Almost the size of a playfield, it is nevertheless not meant to be used for athletic programming but rather for unprogrammed sport, passive use, and play. It is the fair weather social space that provides a soft landscape counterpoint to the hard surface courtyards of the Core. The buildings in the Commons Precinct are sited to form strong, defining edges to the Commons itself and to the important north-south pedestrian spine, the Mews, that edges the Commons on its west side.

Health, Wellness, and Recreation

The Health, Wellness, and Recreation Precinct occupies the southwest corner of the campus where it will be readily accessible to the new University Heights neighbourhood and, with the completion of road access, to the Glenmore Valley community. It builds on the existing gymnasium and playfield with additional recreation facilities: an expansion of the gymnasium, new indoor recreation spaces, and a second playfield. The recreation facilities are co-located with space for academic programs that have a health and wellness focus and, in some cases, offer community services. The new distributed Health Sciences program is located in this precinct.

Okanagan Landscape

The east-facing slope, between the Core and the Highway, has open grassland with stands of pine forest and a small detention pond that comprise a landscape that is iconic to the Okanagan. Throughout the campus and community consultation for the Master Plan, people spoke of the importance of anchoring this campus in the landscape of the Okanagan as the preferred strategy for ensuring a sense of place.

The landscape is used to orchestrate the entry experience along Hollywood Road and University Way. Visitors will move up the hill, through trees, and then see the Okanagan Centre while the view into the grassland opens at the curve of the road. A substantial amount of surface parking has been developed within this precinct with existing and new trees providing visual buffers and shade.

Buildings developed within this precinct include the Okanagan Centre and the Engineering / Management Building (V) and have design guidelines that address their access and loading requirements while achieving a landscape integration with the larger character of the precinct. If the campus expands beyond the program of the 2020 Plan, additional buildings may be sited in this precinct under similar landscape guidelines.

Okanagan Grassland Landscape on Campus

Hilltown

The existing residences, Weather Office building, and daycare already occupy the south-facing hillside on the western side of the campus core. New residences, in both dormitory and townhouse forms, have been developed in the precinct, near the original dorms, and the Weather Office has been adapted as offices for campus operations. Through 2020, some additional development is envisioned in the Master Plan. Should demand for residential accommodation on campus exceed the capacity provided in the Plan, the Hilltown area has the potential to provide sites for new dormitories or for townhouses and apartments suited to families and couples. The current daycare occupies a prime location that could be more intensively developed with a daycare facility within it.

Pine Forest

The pine forest is not required for campus development based on the projected program to 2020 and is therefore left in its current condition. It is used for a network of informal trails and visited by some classes for field work. At present, this forest is starting to suffer from pine beetle infestation that is a significant problem throughout the Okanagan. A research plot has been designated along the north property line to study this problem.

University Reserve Lands

The northeast corner of the campus lands is physically cut off from the central core by the escarpment and lack of direct road or trail links. This area has a number of potential uses for campus-related development or for sale or lease to generate funds for the university including research facilities that benefit from a co-location with UBC O, sports facilities with large footprints that serve both the campus and the larger Okanagan community, or a new hospital or medical facility

KEY PLAN TO BUILDING USE

Future buildings in the Campus Plan to 2020 are categorized as Academic or Residential. The intended uses of campus buildings are described in the chart including estimated total gross area in square metres.

BUILDING + USE		DESCRIPTION	ESTIMATED AREA (M2)
A	Library	Existing library	6093.20
A1	Learning Commons	Expansion of existing library with an internal atrium	12,793.40
C	Cafeteria / University Club / Academic	Adaptive reuse of current Student Services Building for academic uses	5701.20
D	Creative Studies	Existing Arts Building with its third floor addition used for classrooms and offices	10702.30
E	Sciences Building	Existing building	19483.60
E1	Charles E. Fipke Centre for Innovative Research	Existing building	6965.90
F	Arts + Sciences Building	Existing building	8590.00
G	Fine Arts	Existing building adaptively reused for Fine Arts and Creative Studies	5103.20
H1	Recreation Building	Existing Gymnasium expanded for recreation, health, and wellness-related faculties	15,858.70
H2	Residence	Upper Class and Grad Tower Apartments	2,952.90
H3	Health and Wellness Building	Academic Building for Health Sciences	6,738.80
H(G)	Parkade	Future above-ground parkade by surface parking lot H	10571.10
I	Lecture Theatre	A 400 seat all-faculties lecture theatre	897.60
J	Drama Theatre	'Black box' theatre designed for drama and related productions	2,838
K1	J. Peter Meekison Student Centre	Existing University Centre (Phase 1 south)	7353.30
K2	University Centre	Second phase of co-location of campus-wide and community facilities	9,619.20
L	Kalamalka Residence	Existing dormitory	3597.70
M	Nicola Residence	Existing dormitory	5202.80
N	Residence	Future residence	4,297.16
O1	Residence	Future residence	5,905.50
O2	Residence	Future residence	4,032.20
O3	Residence	Future residence	5,137.70
P	Flex Building	Resident Life, Fitness of Food Service	1,039.90
Q1-5	Hilltown Townhomes	Family and Grad Student Housing	117.90 each
R	Valhalla Residence	Existing dormitory	3597.70
S	Parkade	Future above-ground parkade on surface parking lot C	17847.00
T	Daycare	Existing daycare	630.00
U	Mountain Weather Office	Existing building	854.00
V	Engineering Management	Under construction	17279.00
W	Okanagan Centre	Gathering Place for First Nations	2,550
X	UBC O Health Sciences Centre	Future Health Sciences Centre	4500.00
Y	Maintenance Building	Existing works yard	91.00
Z	Residence	Dorm on Existing Parking	3,362.80

LEGEND
Academic
Residential

Key Plan to Building Use

KEY PLAN TO LANDSCAPE + SITE PROJECTS

Campus outdoor spaces are planned to provide a variety of opportunities for socialization, recreation, and respite from active sports fields to walking and cycling trails, from intensely active streetscapes with an urban character to open lawn with a timeless campus appeal. Landscape and site projects are costed separately from buildings, assuming that only 5 metres around each building is part of the building budget. Recognizing that phasing is linked to fundraising, it is hoped that major landscape elements will be implemented as the buildings that complete their edges are built.

LANDSCAPE + SITE PROJECTS LEGEND

ROADWAYS	DESCRIPTION
University Way	Improvements to give University Way a more active 'high street' character with the construction of the University Centre will be continued with the implementation of spaces adjacent to the Learning Commons and Drama Theatre.
The Mews	A narrow road with a mews-like character providing local access to the buildings and open spaces north of University Way and providing the west edge of the Commons.
STREETSCAPES	
Building 'J' Streetscape	Streetscape designed to provide outdoor social space to support events at the Drama Theatre and its lobby.
COURTYARDS / PLAZAS	
Hilltown Quadrangle	Satellite open space that serves as a social hub for housing within the extended Hilltown Community.
University Centre Plaza	The place on campus that brings students, faculty, staff, and the surrounding community together at the co-location of the most public and day-through-evening destinations.
Wellness Terraces	The spaces that link the residential and academic life of the Health and Wellness cluster.
LANDSCAPES	
Entry Landscape	A remnant of the Okanagan grassland landscape as both a key feature of the entry along University Way and an appropriate setting for the Okanagan Centre.
OTHER	
The Commons	A large open green for everyone on campus to enjoy for sunning, outdoor classes, solitary reading, and informal play throughout the seasons.
University Walk	The most important north-south route on campus connects from future Hilltown residences north of the Commons to the gymnasium and playfield. University Walk provides the east edge of the Commons with spectacular views over the valley to the east. It links through the central academic courtyard and University Plaza. It is intended to provide the ceremonial route for Convocation and other significant events.
Campus Woodland Trail	An informal loop trail around the campus for walking, cycling and cross country skiing.
Sports Field	A second sports field to serve the needs of the expanding campus and a new all-weather surface on the existing field.

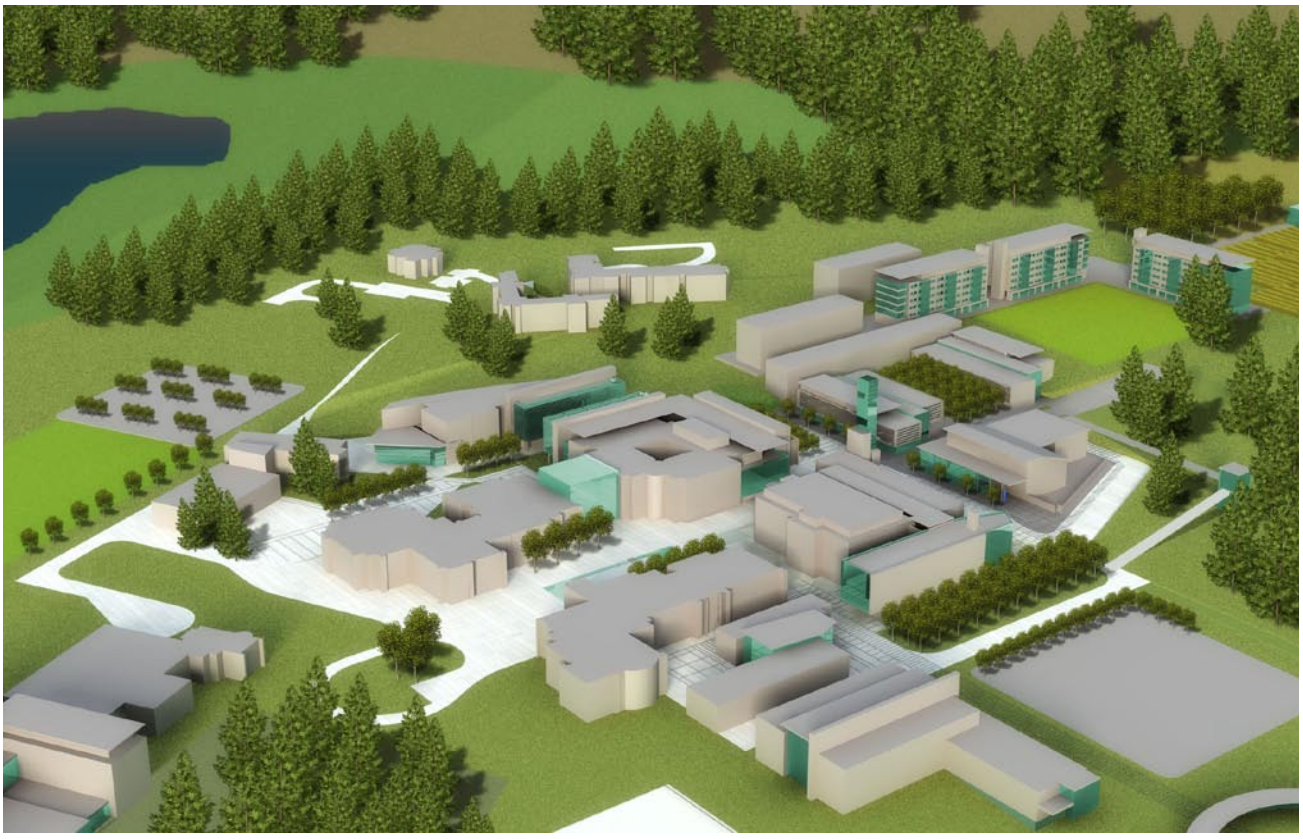
Key Plan to Landscape and Site Projects

PLAN DIRECTIONS

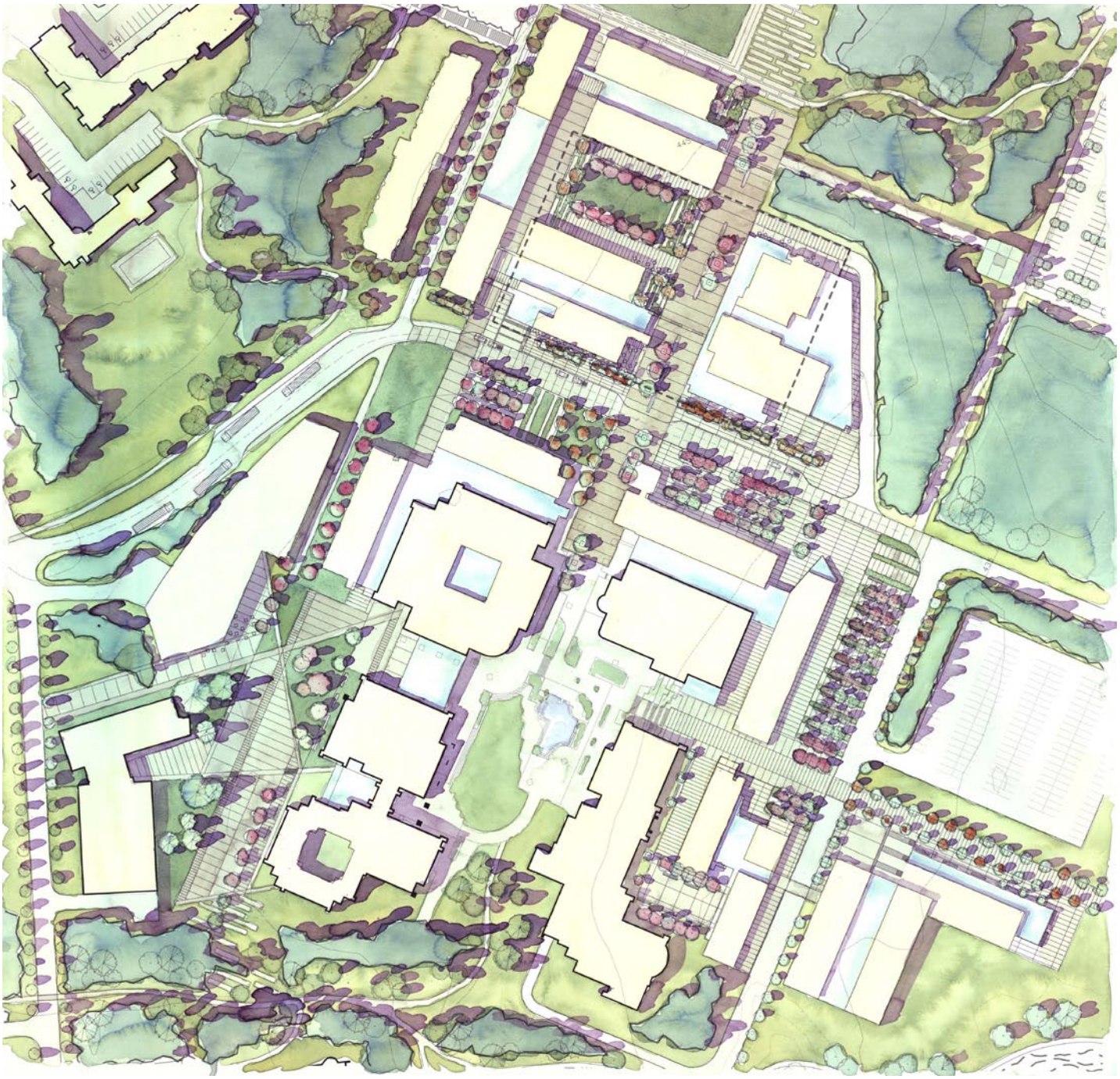
A Demonstration Plan was a key component of the 2005 Master Plan and remains relevant to this 2009 updated version. The intent was to explore, confirm, and illustrate the three-dimensional implications of the Plan and represent one specific way that could be developed that would be fully consistent with the Master Program, the Planning Principles, and the Design Guidelines. An oblique model and perspective sketches assisted in visualizing the Demonstration Plan. The preparation of information for the three dimensional model also required the testing of each building to demonstrate that the footprint and massing meet the requirements of the Master Program.

The process of preparing the Demonstration Plan has informed Design Guidelines for the campus as a whole, for each building, and for specific landscape and infrastructure projects. Since 2005, a number of the buildings and related open space projects that were included in the Demonstration Plan have been built. Consequently, only information regarding unbuilt projects planned for implementation by 2020 are included in the updated Plan Directions.

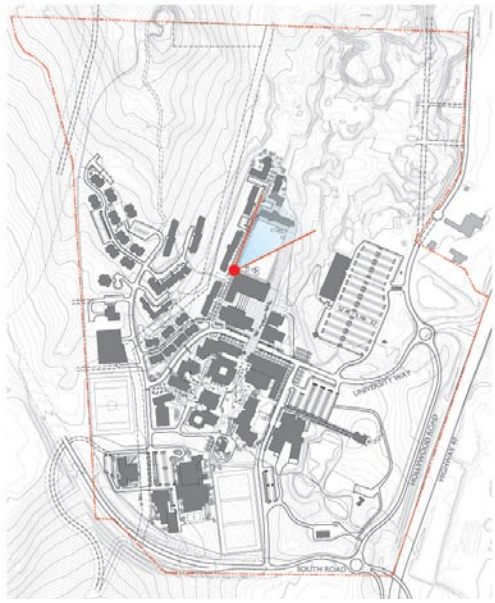
The Demonstration Plan, as illustrated in this oblique 3D perspective, focused on the Academic Core with the existing campus buildings and central courtyard at the centre of the image and new buildings framing new outdoor and atrium social spaces.



Aerial Oblique View of the 2005 Study Model from the Southeast

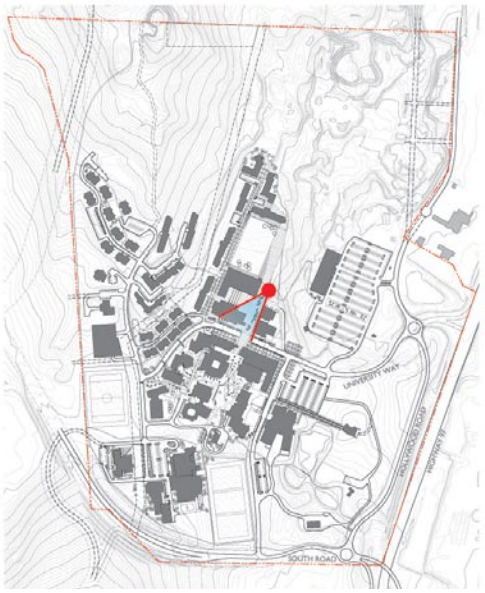


2005 Demonstration Plan



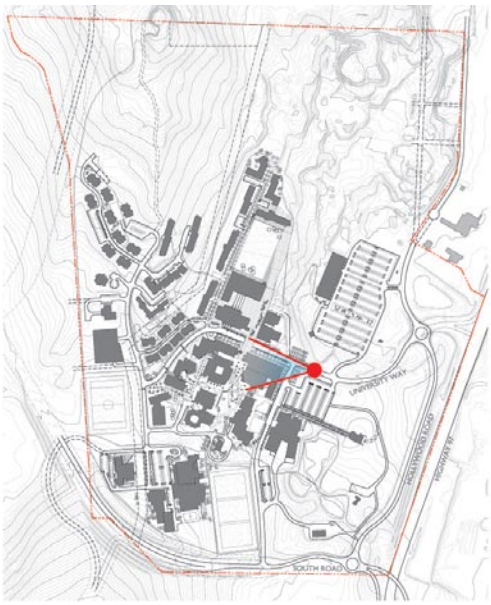
This view illustrates the intended character of the narrow Mews between the Commons and the residential buildings that form its edges to the north and west. Cars and bicycles share the paved surface of the Mews and the Commons is busy with people sitting, sunning, and playing.

Demonstration Plan - Perspective View North to Commons



This view looks into the heart of the University Centre Plaza with the drama and lecture theatres on the left and the University Centre on the right.

Demonstration Plan - Perspective View South to University Centre



This view looks west along University Way near its intersection with South Road. The Learning Commons is on the left and the drama theatre in University Centre on the right.

Demonstration Plan - Perspective View West along University Way

General Guidelines

General guidelines are relevant across the campus as the Master Plan is implemented; these are presented in this section. Guidelines that are specific to individual buildings and landscapes are set out in the subsequent 'Building Directions' and 'Landscape Directions' sections respectively. Please also refer to the UBC O Master Plan companion document, entitled UBC O Design Guidelines for more detailed design guidelines, materials, and specifications to be used during capital project development and reviews.

Urban Design Guidelines

The orientation of the existing campus grid, skewed from true north-south, should set the geometry of the Core and Commons Precincts. Siting of buildings in other precincts, especially the Hilltown Precinct, should respond to the topography and need not have the orientation of the core.

Buildings should be sited to provide defining edges to the courtyards, streetscapes, and other social spaces in the Master Plan. The edges that front on important spaces should be transparent and programmed to animate the adjacent outdoor spaces. Active ground floor uses should be especially near entrances and at corners.

Universal access should be maximized for all new and renovated buildings and open spaces.

Planning, programming, and design should be strategized to encourage mixing and interaction, flexibility, legibility and wayfinding, including donor identification.

Architectural Guidelines

Atrium spaces should be considered in new and renovated buildings to maximize daylighting to interior spaces, to support natural ventilation through mechanically operated ventilating windows, and to support the strategy of creating identifiable spaces for mixing and interaction.

The composition of buildings should relate to the program of open spaces and the hierarchy of movement routes by controlling massing, scale, materials, proportions, and program distribution within the buildings.

Architectural design should reinforce the hierarchy of buildings on campus in order to contribute to wayfinding by urban design legibility. Important spaces and main entries should be emphasized by architectural elements such as vertical elements or prominent entry features.

Residential buildings should be readily identifiable through more finely textured and articulated design than academic buildings. Where residential buildings are sited on sloping topography, they should be designed to respond to the slope rather than require substantial grading to create a flat site.

Landscape Guidelines

Manicured landscapes should be located only in the core and in proximity to buildings. Expanses of lawn should be found only on the Commons and sportfields. Other, peripheral landscapes should take their design cues from the characteristic Okanagan landscape typologies of grassland, wetland, and pine forest and use drought tolerant native species.

North-south streetscapes generally should be lined with regularly spaced street trees except where breaks are made in response to site-specific purposes. The extension of Hollywood Road near the highway is an exception; a grassland landscape should predominate.

Parking lots should be landscaped with internal rows of trees a maximum of five parking spaces apart for visual interest and shading of the pavement.

View Preservation Guidelines

The Master Plan has been structured around the principle of maximizing view opportunities from many places on campus in order to provide a strong sense of place within the Okanagan landscape. The major view corridors should be preserved in the implementation of the Campus Plan and managed over time to maintain views from encroachment of structures, trees, parking lots, and other elements that block or degrade their intrinsic attractiveness.

Precedent for Okanagan Parking Lot from Mission Hill Winery

Key views are protected through the location of passive and active landscapes that are suited to maintaining unobstructed view access:

A The view over the Commons is facilitated by the protection of the forested landscape on the hillside to its east.

B Views from the Engineering/Management Building, the Library and future buildings are enhanced by the protected iconic Okanagan grassland landscape in the foreground.

C Views over the playfield access an agricultural landscape protected by ALR designation.

D The site of the future second playfield will permit views to the agricultural lands to the west to be maintained and enhanced.

Sustainability Guidelines

Opportunities should be sought to make buildings as energy efficient as possible and to build on the investment in geothermal heating that has been endorsed for UBC O. Strategies for consideration include natural ventilation, displacement ventilation, operable windows, heat recovery, and robust concrete structural systems suited to radiant heating. Building rating systems, such as LEED, should be consulted or required in the design and construction of all campus buildings.

Daylight access to interior spaces should be maximized to reduce use of electric lights and is part of the motivation for including atriums in many building concepts. Systems that monitor and adjust lighting levels should be part of the sustainable building strategies. In addition, windows should be operable to provide access to fresh air.

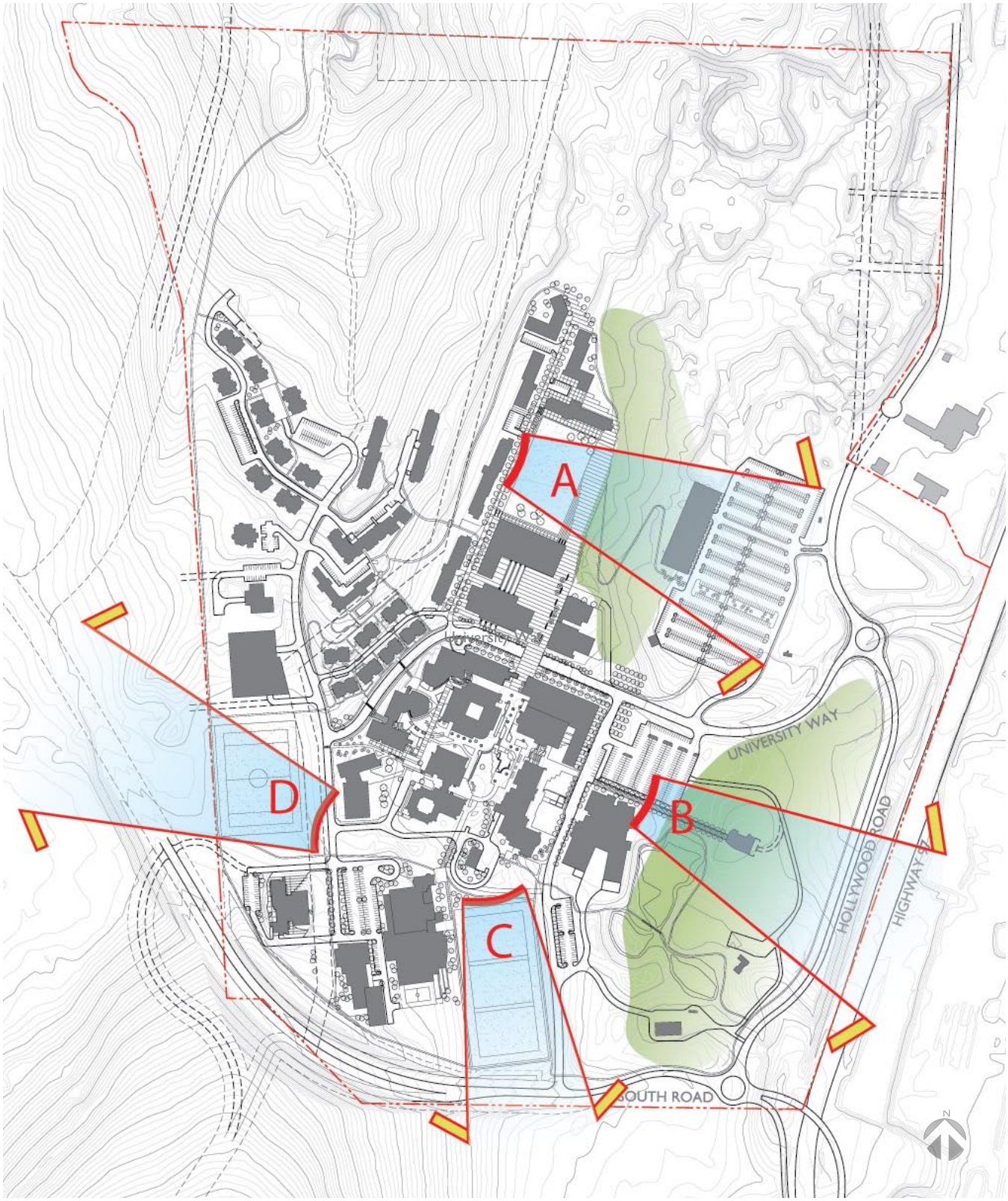
Stormwater management should be integrated into the design of roads, plazas, and other paved surfaces for recharge into the ground or to be directed to detention ponds. Swales along roadways can be used as buffers from cars for cyclists or pedestrians. All paved surfaces should first be considered for permeable paving. Where this is not possible runoff should be directed to swales or detention areas prior to entering the stormwater system.

Precedent for Living Machine

Other sources of water other than potable supplies for use in landscape irrigation should be sought, including rainwater capture and storage and, potentially, utilization of grey water or treatment of black water for irrigation through the implementation of living machines.

Opportunities for green roofs should be sought to deal with stormwater, improve building energy efficiency, reduce heat island effect and promote local habitat. In particular, roofs of new parking garages can be used as habitat areas separated from human contact.

Wherever possible building materials should be renewable resources obtained from regional sources.



View Preservation Corridors and Landscapes

BUILDING DIRECTIONS

LEARNING COMMONS (Building A)

The Learning Commons is intended to transform the existing Library through the addition of new library space, reading and meeting rooms, and offices to the north and east. Uses that benefit from an exterior location with windows and views should move into the new wings, making internal space available for expansion of the library stacks to accommodate new holdings.

The Learning Commons occupies an important site at the crest of the hill of University Way. The Demonstration Plan illustrates a prominent glazed social space at this key corner and a tower element to mark this as an important building at the corner where University Way and University Walk intersect.

Design Guidelines

The Learning Commons should be a welcoming building with visible activity by day and be a well-illuminated lantern at night.

Massing: The program requirements established in the 2005 Building Program generate six storeys with one level below the ground floor occupying and animating the northeast corner of the building at University Way. Fourth and higher floors should step back so that the mass of the building reads primarily as a three storey form of similar height and mass to the Fipke Centre across University Walk to the west.

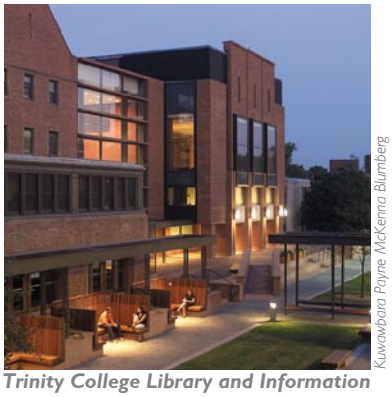
Relationship to Adjacent Buildings: Entries and movement routes should align with those established by the Fipke Centre with an entrance so that people can move directly from one weather-protected space to the other. The facade should relate to the setback from University Way established by the north side of the Fipke Centre.

Relationship to Landscape: The west and south sides of the Learning Commons retain the existing relationship to the Academic Courtyard. The north facade addresses University Way with a streetscape treatment and social space that expands on the landscape that mediates between the Fipke Centre and University Way. There should be a minimum setback of 20 metres between the Learning Commons and the roadway of South Road with a double or triple row of trees forming a bosque along the building edge, breaking across the path to the Gathering Place, and extending to the Engineering / Management Building.

Relationship to Views: The building design should capitalize on the panoramic views across the valley to the northeast.

Kuwabara Payne McKenna Blumberg

Joseph S. Stauffer Library



Kuwabara Payne McKenna Blumberg

Trinity College Library and Information Technology Centre

HEALTH, WELLNESS AND RECREATION (Buildings H1, H2, and H3)

Health, Wellness and Recreation are combined into a complex of buildings as a response to ideas from the 2004 Academic Plan that seek innovative synergies among academic programs and that encourage a well-rounded life for the campus community. It is structured around the existing gym and its expansion concept that completes the upper running track deck and provides improved fitness and recreation facilities. These uses also take advantage of the adjacent sportsfield and the planned location for a second one nearby. The new distributed Health Sciences facility reinforces the intent of the Health, Wellness, and Recreation area.

Building H1 expands the current gym to achieve the planned expansion of athletic programming based on a recent detailed needs assessment with an adjacent outdoor basketball court and enclosed tennis courts.

Building H2 is a residential use within the H2/H3 complex within a 10 storey building. The zoning by-law for the campus permits a 10 storey building based on the 2005 Master Plan concept for Building H2. The updated Master Plan has adjusted the location of the 10 storey building in response to the revised footprint of the gym expansion and the dedication of the future Glenmore Connector; an amendment of the zoning will be required to adjust the area where a 10 storey building is permitted. Building H3 is planned to accommodate several academic programs including Psychology, Nursing, Health, and Human Kinetics. Some of these programs are intended to have a community outreach aspect that is well served by the proximity of Health, Wellness and Recreation to road access, surface parking, and the University Heights development site.

Design Guidelines

Health, Wellness and Recreation should be animated at grade by the program elements that invite public use. The food services should be located to open, in good weather, onto the public deck open space and the western side of the building so that it can be readily used by the public and by spectators of sports events.

Siting: The topography slopes toward the east across the site of Health, Wellness and Recreation. The open space is elevated on the south side to capture maximum sunlight. The slope is used to advantage to gain access to proposed underground parking from the southeast corner of the complex.

Massing: Building elements of varying height are used to breakup the large volume of space within Health, Wellness and Recreation. The residential tower provides a vertical mass that contrasts with the substantial bulk of the gym expansion.

Relationship to Landscape and Views: Health, Wellness and Recreation should be buffered from the main road access along South Road with a strip of trees, either retained or replanted. These trees will buffer the campus from the planned University Heights development as well as traffic. Existing trees on the north side of the playfield should also be maintained. The landscape between these treed buffers and between the buildings and the playfield should be treated as a grassland meadow. Views will be available from the buildings over and through the trees from many vantage points over the plaza towards the agricultural lands to the southeast.

Kuwabara Payne McKenna Blumberg

Richmond City Hall

Kuwabara Payne McKenna Blumberg

James Stewart Centre for Mathematics

LECTURE THEATRE / DRAMA CENTRE (Buildings I and J)

The buildings on the east side of University Centre are envisioned as two theatres: one as a 'black box' drama theatre, considered to be a highly valuable resource for the campus that will require a donor to implement, and the other as one of the two 400 seat lecture theatres to fulfill the requirements of the 2005 Master Building Program. Together these theatres generate a destination for the campus community and the public. The wide variety of uses that will be accommodated within them will ensure day and evening activity that will also help to make food, retail, and other facilities of the University Centre successful. The Master Plan provides the flexibility to build these two theatres at one time or separately, as funding is available.

The drama centre fronts on University Way and its lobby space should be transparent and programmed to create interest from the street side and to spill onto the streetscape during events. The transparent lobby wraps around the lecture theatre providing social spaces for both theatres with flexibility to be used separately or combined to meet the program needs for academic, conference, and public purposes.

The east side of the buildings is intended as an enclosed service yard to support theatre activities at the grade of the University Way with access to underground parking at a level down. Visual access should be available into these outdoor support spaces for the interest of passing pedestrians.

Design Guidelines

Although theatres are 'black box' buildings, the concept of wrapping the exteriors with glazed lobby space ensures that they will add interest and ambient light at night to the public realm.

Siting: The setback of the Drama Centre from University Way should be the same as that of the University Centre (K1) to define a continuous streetwall. The west facade should contain the edge of University Walk.

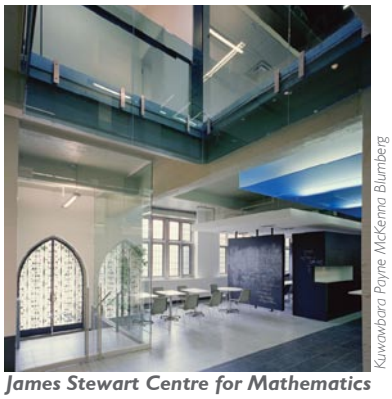
Massing: The glazed lobby space should be high enough to enclose the bulk of the theatres behind it.

Relationship to Adjacent Buildings: These buildings define and create pedestrian-scale interest for University Walk and University Way. They should read as two related but distinct structures. The architecture of both should be coordinated; the second one implemented should respond to the form, massing, and materials of the first.

Relationship to Landscape and Views: The external lobby where views can be seen should emphasize the contrast between views into the active heart of the university to the south and east with views of pine forest to the north. The forest buffer on the west and north sides should be protected, and replanted where necessary after construction, as a buffer to the parking lot downhill and to the west of University Centre.

Bing Thom Architects

Lobby of Simon Fraser University Surrey Campus



Kuwabara Payne McKenna Blumberg

James Stewart Centre for Mathematics Hamilton, ON

RESIDENCES AROUND THE COMMONS (Buildings N, O and P)

Buildings N and O should integrate with the Kalamalka Residence to create a building wall along the west and north edges of the Commons. Building P is a two to three storey building that can house services for the residents in this part of campus, such as food service, fitness or student life programming. It is open and heavily glazed and might be a place where students from different residence buildings meet to have coffee or study.

Design Directions

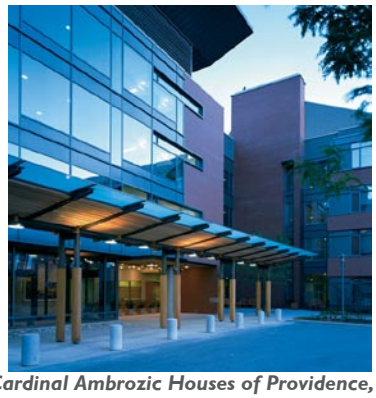
It would be desirable for the ground floor of Building N or O or an adjacent smaller stand-alone building to include some program elements that attract use from people across campus so that the Commons maintains its role as a campus-wide social space rather than one serving a specific group of residences. A satellite fitness centre would be a suitable use for this purpose.

Siting: Building O1 should be sited to form a building wall along the north end of the Commons; its front facade should respond to the geometry of the Commons by being rectilinear and parallel to the edge of the Commons. It is anticipated that the ground floor of Building O1 will be at least two metres higher than the elevation of the adjacent Commons with a landscape response that will provide wide terraces stepping up the slope that are designed to be used by the campus community for sitting and socializing as individuals and also in groups. Building O1's west facade should have a similar setback to the Mews as those of the Kalamalka Residence and Building N. Surface parking may be located at the rear of these buildings but should be screened by the building from view from the Commons.

Massing: The buildings should be massed within the footprint established in the siting guidelines and may be two to five storeys in height depending on the program requirements. A large internal program for Building O1 could be accommodated without compromising the alignment of University Walk by having the east end cantilever or create a portal at the ground level.

Relationship to Adjacent Buildings: The architectural design should relate to the Kalamalka Residence to create a harmonious ensemble around the Commons.

Relationship to Landscape and Views: Building O1 will enjoy the best views on campus: across the length of the Commons to the University Centre to the south, wide unobstructed views over the valley to the east and north, and into pine forest and the productive landscape to the northwest. The architectural design should capitalize on these views with extensive glazing and the placement of social spaces to capture the best orientations. Likewise, the eastern end of Building O1 should be designed as an architectural feature to enhance the northern end of University Walk. One possibility is a cantilevered structure that allows access underneath to the other residence halls in the Hilltown area.



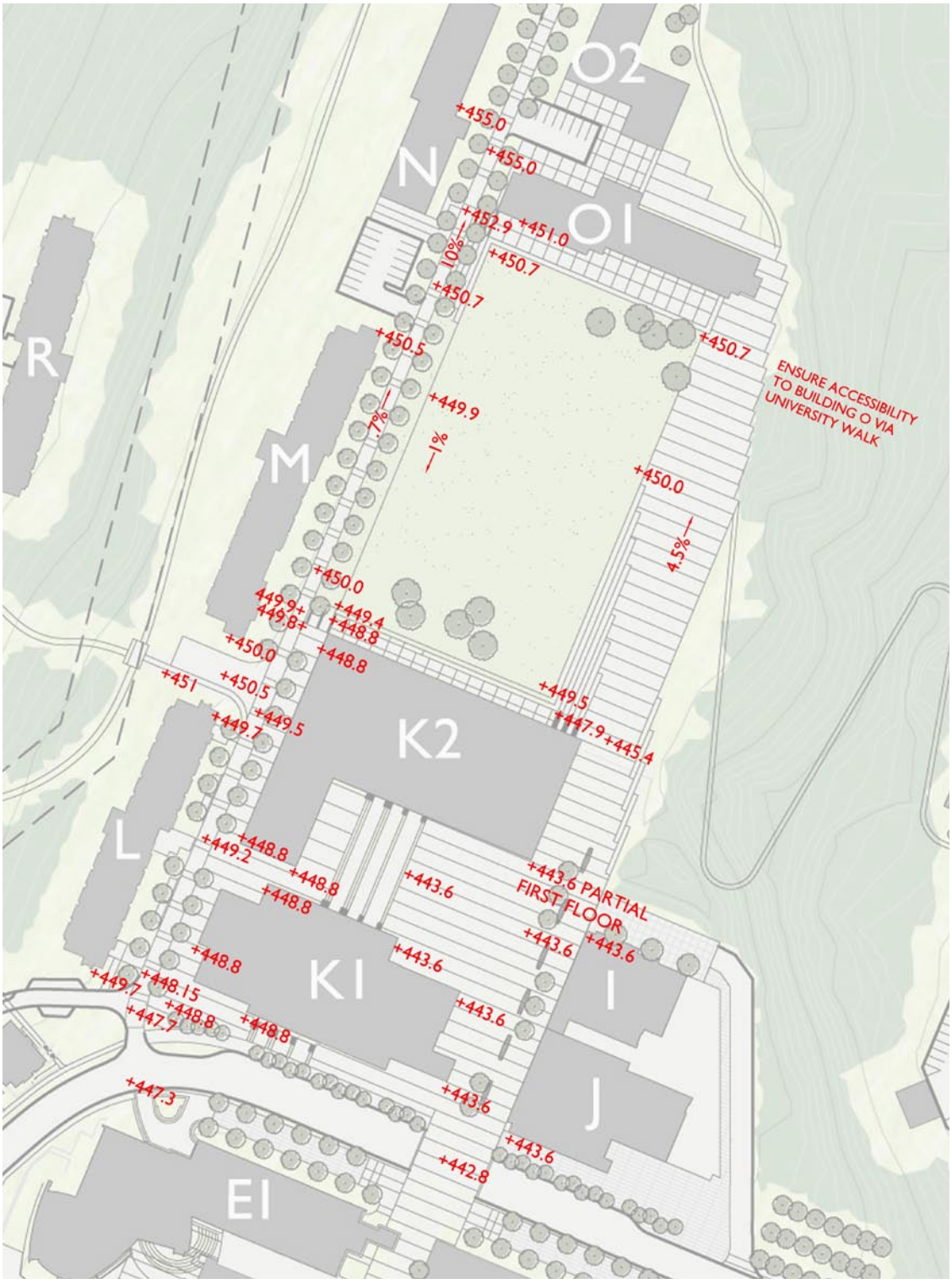
Kuwabara Payne McKenna Blumberg

Cardinal Ambrozic Houses of Providence, Toronto, ON

Polshek Partnership Architects

William J. Clinton Presidential Library and Museum
Precedent for Cantilever on Building O1

During the preparation of the 2009 Master Plan Update, the Kalamalka Residence was constructed along the Mews (Building M). Detailed site elevations were established to ensure coordination with future buildings around the Commons.



Spot Elevations around Commons

OKANAGAN CENTRE (Building W)

The Okanagan First Nation students and other aboriginal community representatives who participated in the discussions about the 2005 Campus Plan advocated that their traditional relationship to the land should be recognized and celebrated on the UBC O campus. It was suggested that a Gathering Place should be incorporated into the plan within the east-facing iconic grassland landscape between University Way and the Engineering / Management Building. The built form was envisioned to embody a contemporary expression of Okanagan First Nation structures.

The Okanagan Centre is not an academic building and not part of the university funding provided by the Provincial Government - it will be implemented through the participation of donors and fundraising and, therefore, could occur at any time in the future. In 2007, the UBC Okanagan Development Office submitted a Business Plan for the Okanagan Centre to the Ministry of Advanced Education under the Gathering Places Capital Funding Program. As part of developing the Business Plan, a design concept was explored and illustrated. The final design may vary from this option.

Design Concept

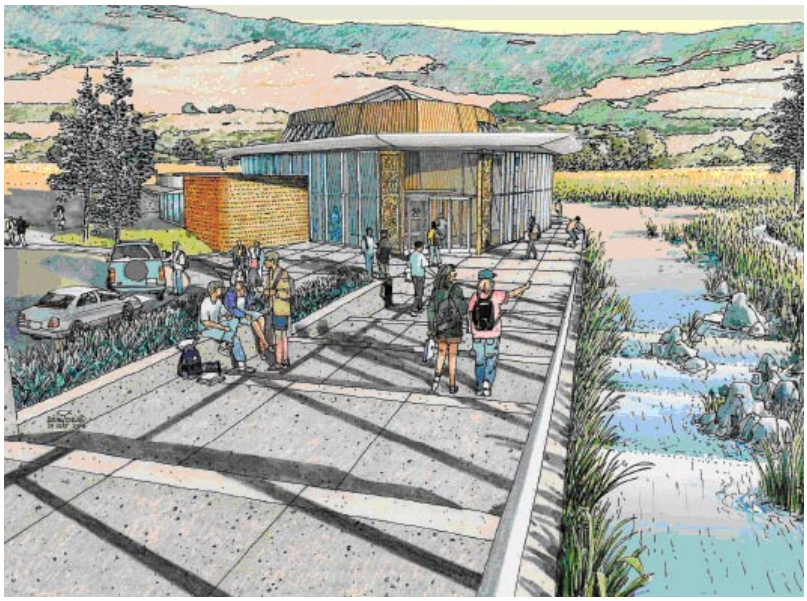
The design option explored for the Okanagan Centre to date references the Aboriginal history of the Okanagan Similkameen people. It is a 630 square metre building with design reference to traditional Okanagan Nation structures. It has an elliptical shape and blends with the surrounding landscape, seamlessly bridging indoor and outdoor spaces.

Visitors to the Okanagan Centre will be struck by the majestic carved cedar panels that flank the front entry. Inside, the main architectural feature of this beautiful building is the Central Gathering Hall. The circular shape of the inner space is inspired by the extended tipi used by Okanagan Nation people and will include some of the iconic structures found within the Okanagan tradition. The soaring timber canopy ceiling is reminiscent of a traditional gathering place for Aboriginal ceremonies.

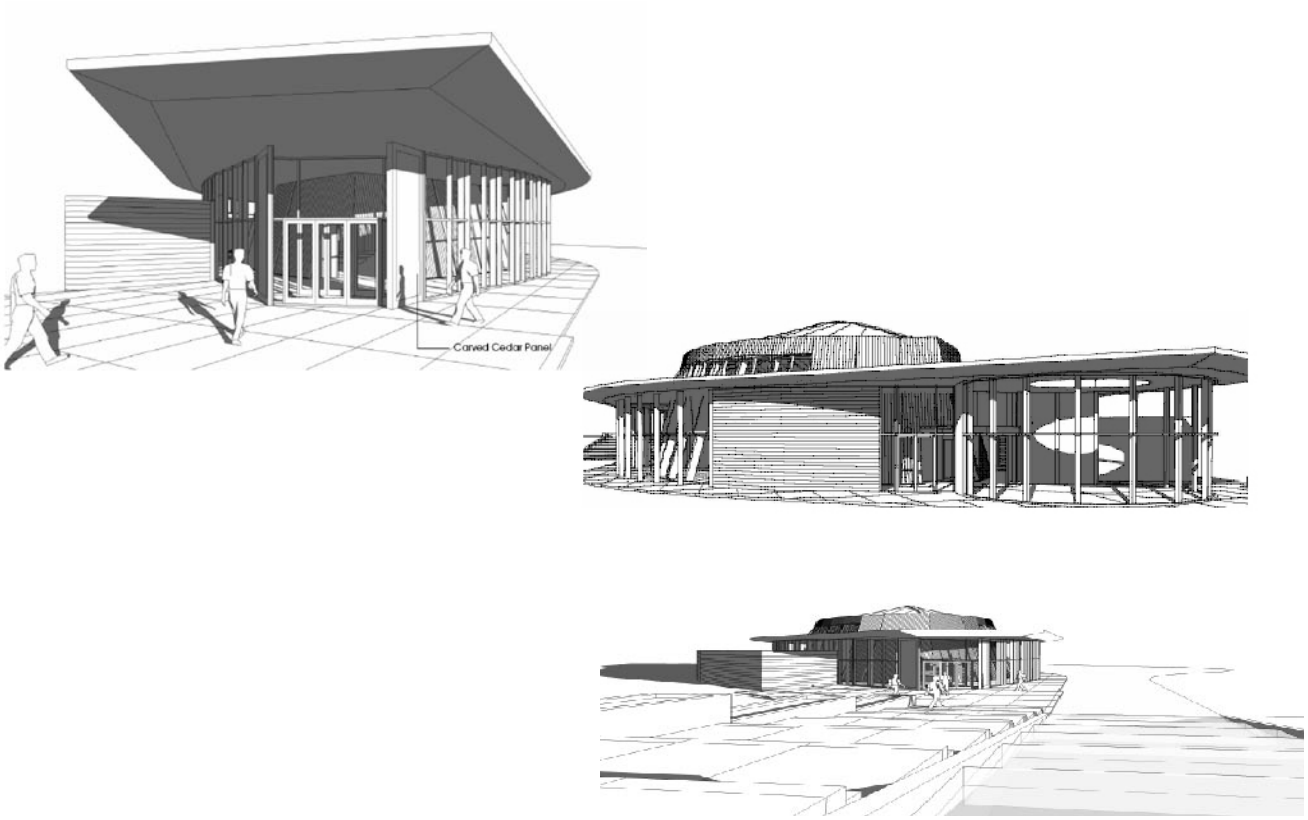
The main gathering hall will accommodate seating for 200. The building would have a unique role on campus, possibly including Board and Senate meeting facilities and featuring state of the art audio and lighting infrastructure and video/film screening capacity. The Okanagan Centre will be a welcoming place for all. Display areas will showcase Aboriginal art and artifacts and serve as an archival resource for UBC Okanagan students, Indigenous Studies at UBC Okanagan and the broader community.

Other design features include:

- A smaller, 80 sq. metre multipurpose room suitable for meetings and student gatherings
- Four break out rooms with seating for 15 (ea)
- Display areas throughout the centre for artworks, artifacts, special library resources
- Spacious outdoor terrace and indigenous plant garden with a BBQ area suitable for receptions and celebrations
- Indoor and outdoor kitchens.



Artist's Concept of the Okanagan Centre



Conceptual Models of the Okanagan Centre

BUILD-TO LINES

As a tool for implementation of the plan, the key build-to lines for building footprints are illustrated and their design rationales summarized. A build-to line establishes a location at which a building mass must be sited in order to meet specific urban design objectives regarding the creation of planned campus social space. These lines define the most important social and movement spaces where a building is intended to provide a containing wall and, in specific cases, to animate the space with interesting and activity-generating adjacent uses.

Buildings N and O should provide rectilinear edges to the Commons. Building N should respond to the facade of the Kalamalka Residence and achieve a continuous building wall along the west side of the Commons.

Building K2 should define a strong geometry for the completion of the University Centre complex with build-to lines on the west to contain the Mews and on the east to structure University Walk. The north side of K2 should provide the south edge of the Commons and should have uses that can be viewed and engaged from the adjacent walkway.

The University Plaza is formally defined by building walls of K1 and K2 on three sides and of I and J on the east side of University Walk.

The pedestrian axis centred on the Okanagan Centre is defined by required build-to lines including those currently shaping the Engineering / Management Building.

Build-to-Lines are also addressed in the UBC O Design Guidelines.

Building O1 provides a rectilinear edge to the Commons. The ground floor should be a minimum of 1 metre above the elevation of the Commons.

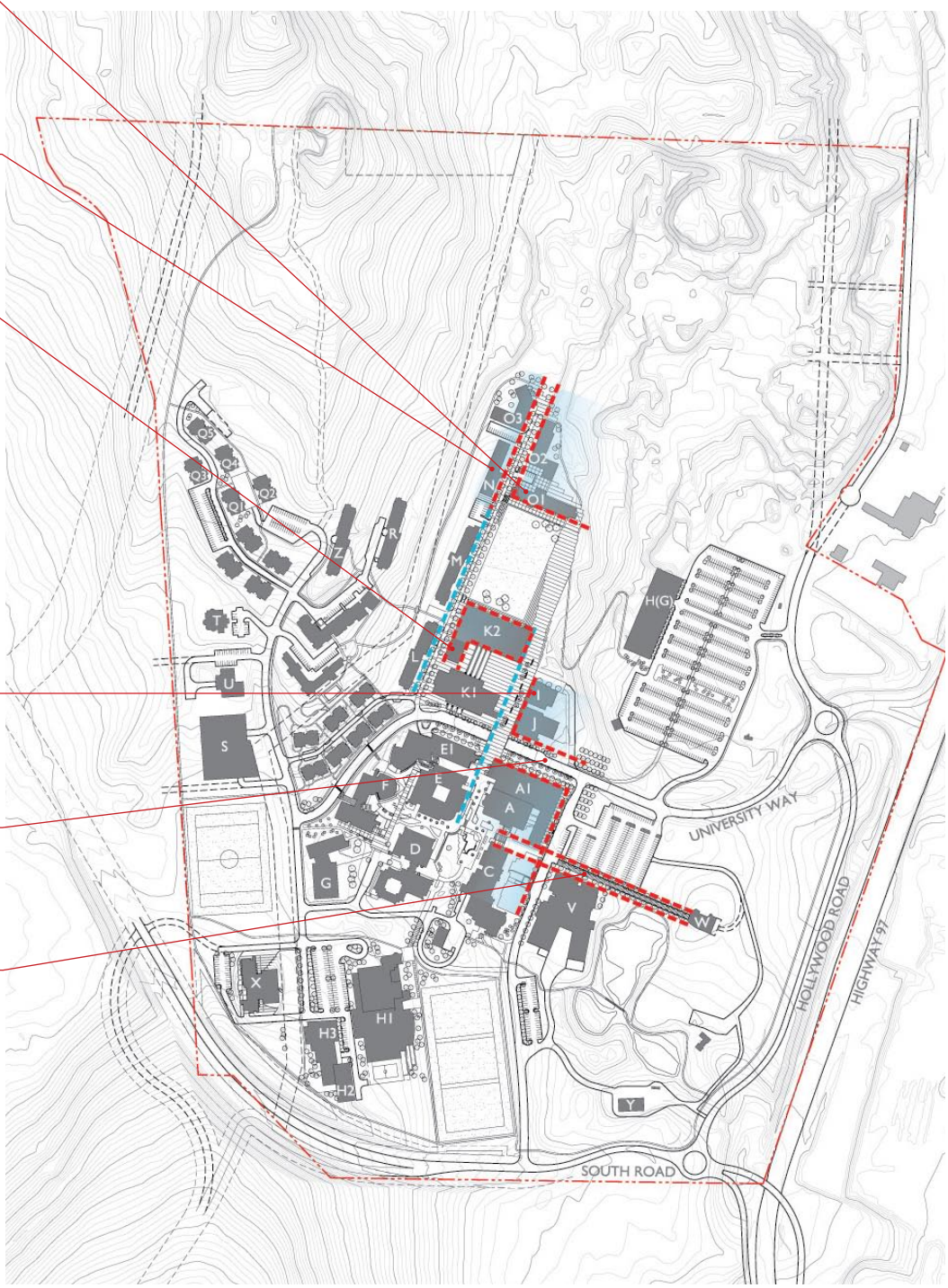
Building N should be built to the same setback as Building M to create an edge to the Mews and the Commons.

Buildings K1 and K2 define a strong geometry for the University Centre with build-to lines on the west to contain the Mews and on the east to structure University Walk. The north side of K2 provides the third edge of the Commons and should have uses that can be viewed and, ideally, engaged from the adjacent walkway.

The University Plaza is formally defined by building walls of K1 and K2 on three sides and of I and J on the east side of University Walk.

Along University Way the build-to lines of J and A1 should create a complementary social space animated by glazed activity spaces within these buildings.

The pedestrian axis centred on the Okanagan Centre is defined by required build-to lines.



LEGEND
- - - Build-To-Line
- - - Reference Line Determined by Existing Building Face

Built-To-Lines

LANDSCAPE DIRECTIONS

STREETSCAPES

The design of the streetscapes on campus should readily communicate a hierarchy of importance and thus aid in wayfinding for visitors. The typical local road throughout the campus should be dimensioned for two moving lanes, one in each direction, and sufficiently wide to make cycling comfortable without permitting on-street parking. The roadway should have curbs in the intensive heart of the campus where an urban character is desired and soft shoulders in the Hilltown precinct, adjacent to playfields and open spaces, and, generally, at the periphery of campus. A single row of street trees should be planted along these roadways, where space permits. Sidewalks are not always required since pedestrians will move through campus primarily on pedestrian routes or traffic-calmed shared mews or lanes.

The guidelines for typical streetscapes are varied in a number of specific locations described below. The UBC O Design guidelines provide more detail for use on capital projects.

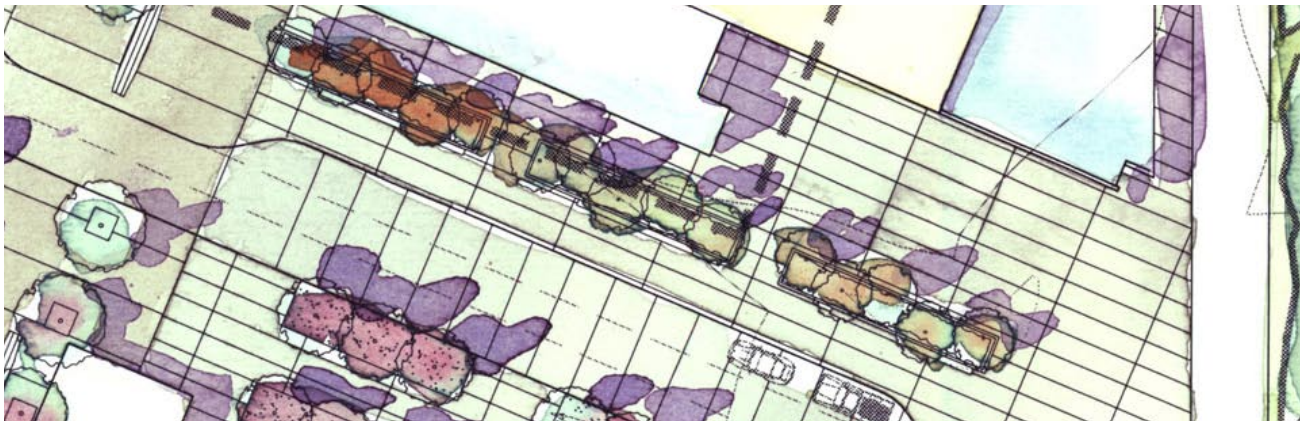
University Way Streetscape

The streetscape for University Way changes character and function along its length. Between the entrance at Highway 97 and the roundabout at the intersection with Hollywood Road, University Way may in future to be closed and removed, subject to UBC consent. The roundabout begins to introduce a campus rather than transportation aesthetic to the design of University Way and should feature a landscape that expresses an Okanagan character and uses local plants. A gateway and signage design is being implemented. Between the roundabout and the intersection with Penticton Avenue, University Way will generally retain its current alignment and treatment. Street trees should not be used in this segment of University Way; the existing groups of trees, managed to provide glimpse views to the campus, provide an appropriate landscape character and should be retained.

University Way should change to a more active and urban character as it enters the heart of the University Centre. The Learning Commons (Building A) has a generous setback along the south side of University Way that is planned to accommodate a social space that invites people to linger, watch the passing crowd, engage in quiet conversation, or read a book. A regular grid of trees related to ample seating opportunities should be the cornerstone of the design of this key campus space and will provide users a choice of places from full sun to deep shade.

Precedents for University Way at the Learning Commons

The north side of University Way within the University Centre is envisioned as a place of intensive activity where the uses of adjacent buildings have been programmed to spill out into the streetscape and provide day and evening animation for the campus community, visitors and residents of surrounding Okanagan municipalities. The streetscape next to the theatre (Building J) should be programmed to function in concert with adjacent theatre lobby as a place for conference events, parties, and opening night galas. Optional underground parking might be considered under the theatre, if needed, to provide easy access to performances for off-campus guests.



Concept Sketch for University Way along Building J

The Mews

The Mews is a narrow streetscape intended for shared use by pedestrians, cyclists, and vehicles. Because the Mews is not a through street it will have limited traffic demand so that all users can safely mingle on the paved road surface. No sidewalks are needed but street trees should be planted in a regular rhythm along a curbed edge.

The siting of the buildings that line the Mews is intended to create a streetwall that reinforces its linearity and provides spatial containment along its edges except where the Mews opens up to wide views over the Commons and to the valley beyond. The south part of the Mews has already been constructed to the Design Guidelines and forms the template for its northern extension to Buildings N and O. North of this point the Mews is planned to continue northward into the Hilltown residential area and will have a steeper grade as it moves out of the Commons Precinct.

Depending on the extent of future residential expansion north of Building O1, an additional access road to this area may be needed to meet capacity and fire protection access requirements. In this eventuality, the Mews could become a pedestrian-only access route on the same linear alignment. In a pedestrian-only role, it could use a combination of stairs and ramps to climb the hillside slopes; the width, paving materials, and street tree patterns should be maintained in either design approach.

COURTYARDS AND PLAZAS

In consultation during the Campus Plan process, questions were often raised about the ways that the physical campus concept promotes the Vision, Mission, Imperatives and Pathways of the Academic Plan and, in particular, the intentions to enable "students and faculty from traditionally segregated disciplines to mix and collaborate more easily, enhancing interdisciplinary education, research and community engagement." (Academic Plan, June 2005, page 3)

Emphasis on collaboration, communication and teamwork has been expressed in the creation of a wide variety of social spaces and facilities that will be shared on a daily basis by faculty, students and staff from many disciplines. New courtyards for University Centre, Arts and Sciences, and Engineering / Management are planned to complement and expand the range of existing outdoor spaces on campus.

Wellness Terraces

Terraces are envisioned over an underground parking structure for the Health, Recreation and Wellness complex. These spaces would command impressive views that will attract users year-round.

Food services would help to animate a terrace space with outdoor eating in good weather and use by residents of the tower will add activity at all hours. The design should respond to the building architecture and be programmed for both daily use by a variety of user groups and special events, especially related to sports tournaments and related gatherings. To the south of the Recreation Complex (Building H1), a covered space or a potential multi-court is suggested for recreational activity. The ground adjacent to the gymnasium is elevated above the playfield and will therefore create a stepped seating zone inviting use by game spectators.

UNIVERSITY CENTRE

The University Centre is the heart of campus activity, both day and night, with facilities to attract everyone on campus and the surrounding communities, that is planned in time to include a drama theatre and another 400 seat lecture theatre, as well as the food services, retail outlets, and student association spaces and services currently being implemented.

University Walk

University Walk is the primary north-south pedestrian spine of the campus. It embraces the existing central courtyard and extends it, on the same axis, northward to link through the University Centre and beyond to Building O1. Over its length, it changes several times in its roles and design intentions.

The Master Plan assumes that the original central courtyard will remain in its present configuration through its 2020 time horizon. In the area around University Way, University Walk is integrated into the design of the Fipke and University Centres. North of the second phase of University Centre (K2), University Walk becomes a path along the east side of the Commons with an informal character that addresses the adjacent naturalized vegetation along the forested escarpment and provides a design transition to the escarpment from the Commons along its east side.

Precedents for University Walk

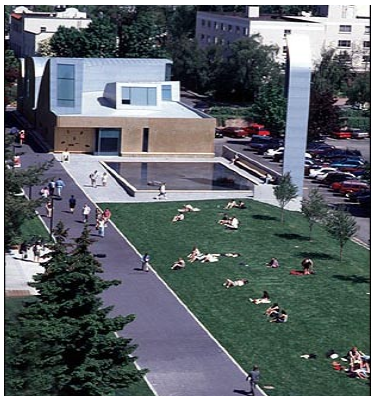
University Centre Plaza

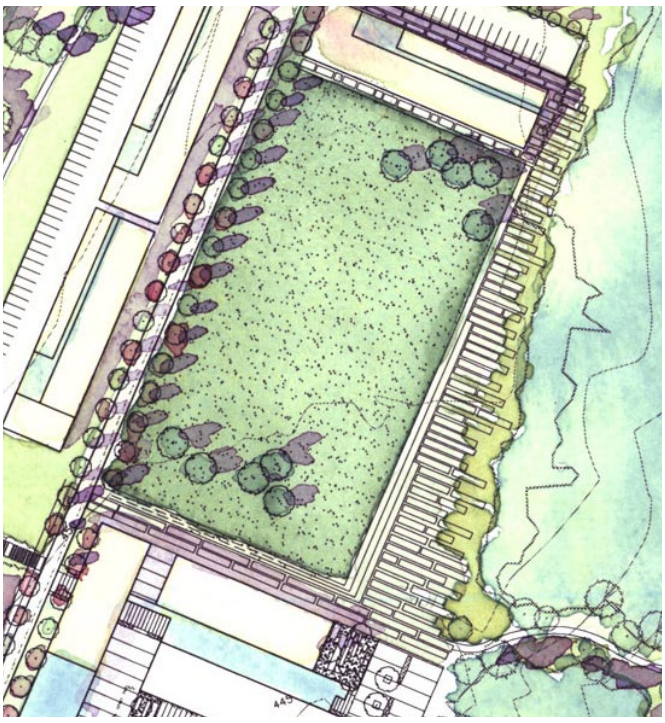
A hard-surface plaza is the social heart of the University Centre, animated by people moving among the many destinations within buildings of University Centre, the Drama Theatre, and the adjacent 400 seat lecture theatre. The design should offer weather protection at the edges and ample seating in both sun and shade locations. Stairs are a key feature of this space to address the changes in grade between the Plaza and the Mews. The stairs should be wide and their descent interrupted by terraces; the design should anticipate that University Plaza is the place on campus where large gatherings are invited to occur, including playing a key role in the sequence of events around commencement ceremonies.

The lower, eastern part of the plaza that is on grade with the first phase of University Centre and the future Buildings I and J should be designed to be readily programmed for large gatherings. Consequently, furnishings, seating, and any elements such as art or water features should be confined to the periphery to provide animation to the space on a daily basis but not to constrain large events. The potential location of temporary stages should be anticipated in the design process so that good access and sightlines are available and facilities such as electricity, sound systems, and water are readily available for support to events.

The Commons

The Commons is the place for gathering when the sun is shining and the weather is warm. A substantial and generously sized lawn with a formal geometry is a quintessential open space on university campuses. The Commons can accommodate classes moving outside for group discussion, individual sunbathers, games of catch, hackysackers, all at the same time. In order to achieve a level lawn, the south edge will need to be elevated above grade level of the University Centre (K2); broad steps with lawn contained within seating walls is suggested to achieve this grade change in a way that provides additional spaces that can be occupied by groups or individuals as well as used as an informal amphitheatre space. A similar response to change in grade is proposed at the north end as a transition to the residences in Building O1. A few specimen trees in groups to provide areas of shade may be used within the Commons but most of its central area should be an uninterrupted and well maintained lawn.





Precedents for the Commons

Okanagan Landscapes

There are a number of landscapes on the campus that together represent the characteristics of the Okanagan region. Some of these landscapes exist as naturalized remnants on disturbed sites: the pine forest, the detention pond which appears naturalized and the open grass meadow fronting on the highway should be managed to maintain their health and their value as backdrop to the campus.

Another important iconic landscape of the Okanagan is the productive valley lands and, especially, the ordered rows of traditional Okanagan agriculture: the orchard and the vineyard. In the 2005 Plan, the disturbed area north of the Commons Precinct was identified as well suited for research plots that support academic programs with a program of research plots and greenhouses that could be meaningfully structured to emulate the productive Okanagan landscape. The potential to incorporate an authentic productive landscape has now emerged through the acquisition of the Tutt lands along the west boundary of campus and the lands north of the Commons are now envisioned as part of the Hilltown Precinct with a landscape character the expresses the valley slopes of the Okanagan.

Campus Woodland Trail

A looping trail is part of the Master Plan that connects through the more natural and passive landscapes on campus, including the pine forest and the detention pond, to offer the campus community a place to walk that takes them away from the active, built campus for recreation, respite, and a chance to think. This trail should be surfaced in gravel or crushed limestone rather than paving to suit its predominantly natural setting.

Campus Woodland Trail

Social Spaces and Their Functions

The Master Plan provides a rich variety of social spaces, including streetscapes with specific characters and functions, courtyards animated by movement among adjacent buildings, and green spaces with either active sports or informal play. Many of these spaces function in the day-to-day life of the campus, yet they have the potential to be used for special, temporary large-scale events.

The Commons – a lawn area with some clusters of trees at its edges for socializing and informal play; suited to outdoor classes and large gatherings, either open air or in temporary tents

Surface parking lot – potential for use as event venue with temporary tents

University Square – informal gathering and active crossroads space with urban character; outdoor space with some weather protection at edges; suited to temporary outdoor booths for information, clubs, secondhand textbook sales

Urban Rooms – hard surfaced spaces along movement corridors with seating for people watching and socializing

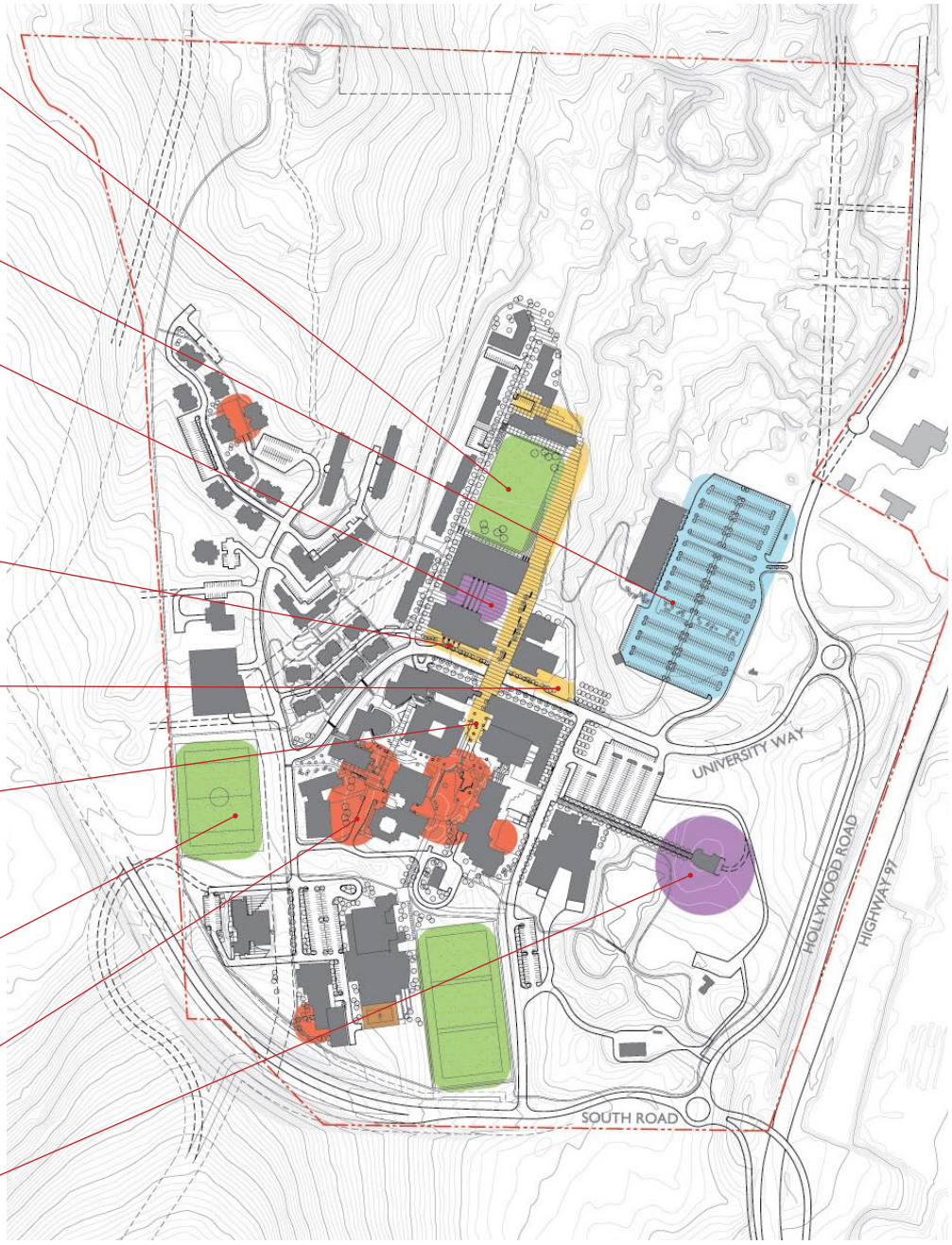
High Street – activity area with opportunities for outdoor eating

University Walk – primary circulation space; route for campus parades ending in gatherings on the Commons or ceremonies in the gymnasium

Sports Fields – informal play when not programmed for active sports

Plazas – outdoor gathering and socializing; outdoor eating associated with interior food services

Okanagan Centre – informal daily use; potential for large scale gatherings



LEGEND
- Open Lawn Area and Sportsfield
- Plazas
- Gathering and Event Space
- Urban Room: Hard Surfaced Open Space along Corridors
- Surface Parking Lot: Potential for use as Event Venue
- Outdoor Athletic Court

Campus Social Spaces

CIRCULATION NETWORK HIERARCHY

The streetscape and landscape guidelines for the campus are summarized in this diagram that shows their roles in the road network hierarchy.

Circulation Network Hierarchy

Sustainable development initiatives are supported by the University of British Columbia's mandate and have been incorporated into the planning process for its growing campus in the Okanagan.

Through workshops and consultation, a number of ideas for sustainable initiatives have been identified that are suited to this campus:

- A geothermal energy project for heating and air conditioning with very significant benefits to the environment as well as favourable life-cycle cost projections has been implemented.
- The aquifer below the campus, used for the geothermal energy system, could also provide a source of water for non-potable uses, especially for maintaining landscapes on campus that are not drought tolerant such as playfields and the Commons, pending applications for its use and environmental assessment.
- Most of the peripheral campus landscape will be designed with native plants suited to the Okanagan climate that, once established, will not be irrigated.
- Buildings will be designed to be energy efficient to minimum of LEED Gold certification and with features to promote non-mechanical ventilation, natural light and passive solar heating.
- The existing detention pond will be enhanced and remain part of the stormwater management system.
- New parking lots should include trees and be designed to minimize the amount of hard surface and integrate the lot within adjacent landscapes. Parking lots may be used in a number of different ways when not occupied by cars including outdoor markets/fairs.

Existing Storm Detention Pond

Precedent for Parking Lot with Bioswales

Parking

A number of strategies to reduce reliance on the private automobile have been considered in the development of the Master Plan and include significantly improved transit access with a UPass System, bicycle access and secure storage, connections to pedestrian and cycling trails, and improved campus amenities to encourage resident students to be less reliant on the automobile.

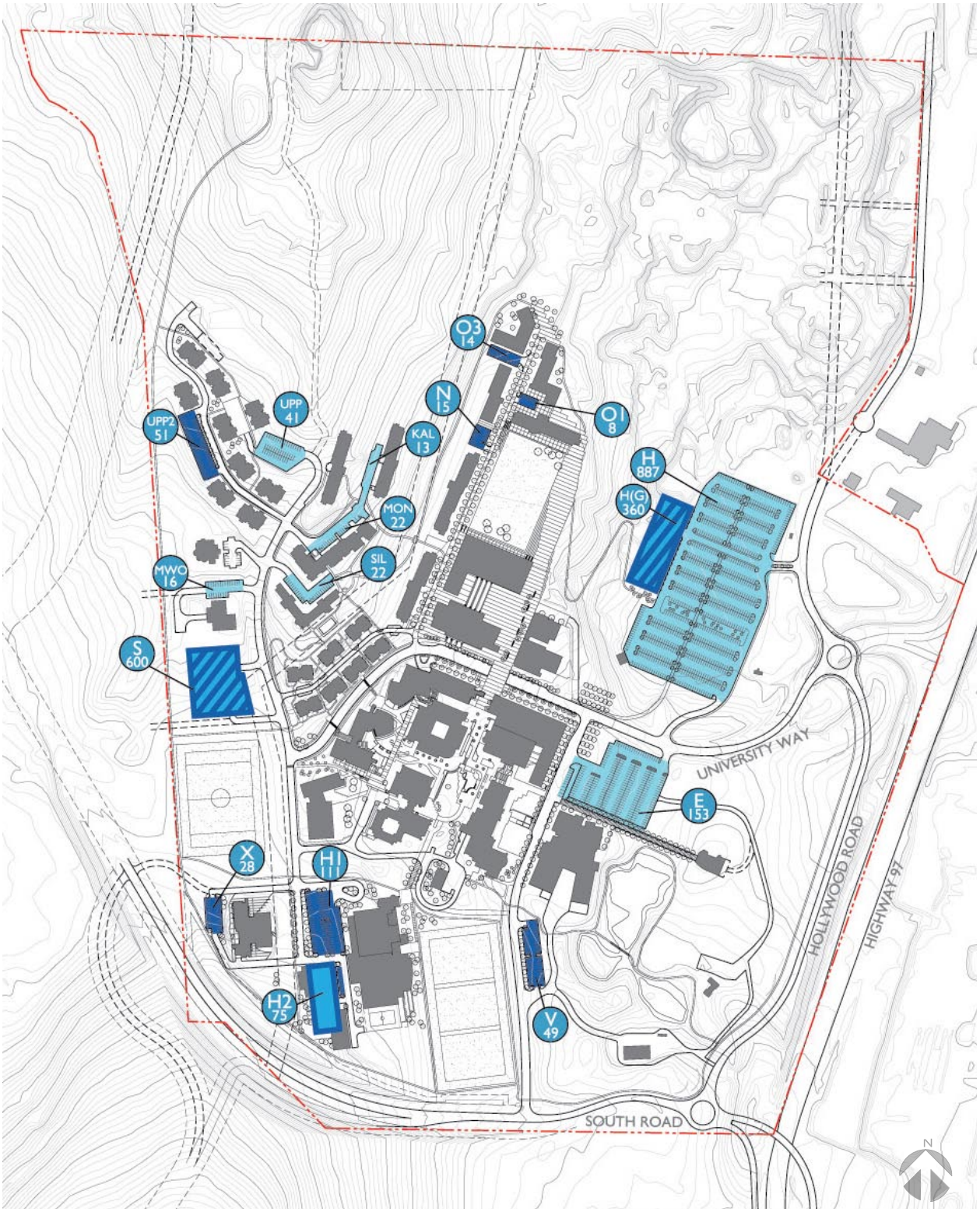
Nevertheless, the need for a substantial component of primarily surface parking is recognized since measures to move away from a car-oriented, commuter campus towards increased transit, cycling, and pedestrian access and a larger proportion of on-campus residents will take time and cannot be expected to change dramatically by 2020. The parking

plan includes 2465 parking spaces at full build-out of the Master Plan, achieving 1 stall per 4 persons based on a population of approximately 8500 students, faculty and staff. This supply includes the introduction of parkades on the east and west sides of campus, as the need arises. In the interim years while transportation alternatives are being strengthened and student housing increases reduce commuter demand, any supplementary surface lot parking will be directed to future building sites to minimize unnecessary tree and landscape loss in the long term.

A large student lot (H) has been built in stages, as existing parking lots became sites for new buildings. A new parkade is proposed adjacent to surface Lot H. Its exact location will need to be studied in relation to the underground pipes for the geotechnical heating system.

Some underground parking is proposed under later phases of development in locations where high numbers of visitors to campus are likely willing to pay extra for the convenience of parking immediately next to their destination. Some of the remaining surface lots are identified as future building sites for post-2020, should the campus expand beyond the capacity of the 2020 Plan.

Existing Parking		***New Parking to 2020***	
Lot E	153	S (New Parkade - 4 floors over surface Lot C)	600
Lot H	941	H1	111
Residences (UPP, UPP2, KAL, MON, SIL)	99	H2 (Underground 2 floors under building H2 and H3)	75
MWO	15	N	15
		O1	8
		O3	14
		UPP2	51
		V	49
		X	28
		H (G) Parkade (Adjacent surface parking Lot H)	360
TOTAL	1208		1311
Partial Parking Removed (H (G))			54
		Combined Total	2465



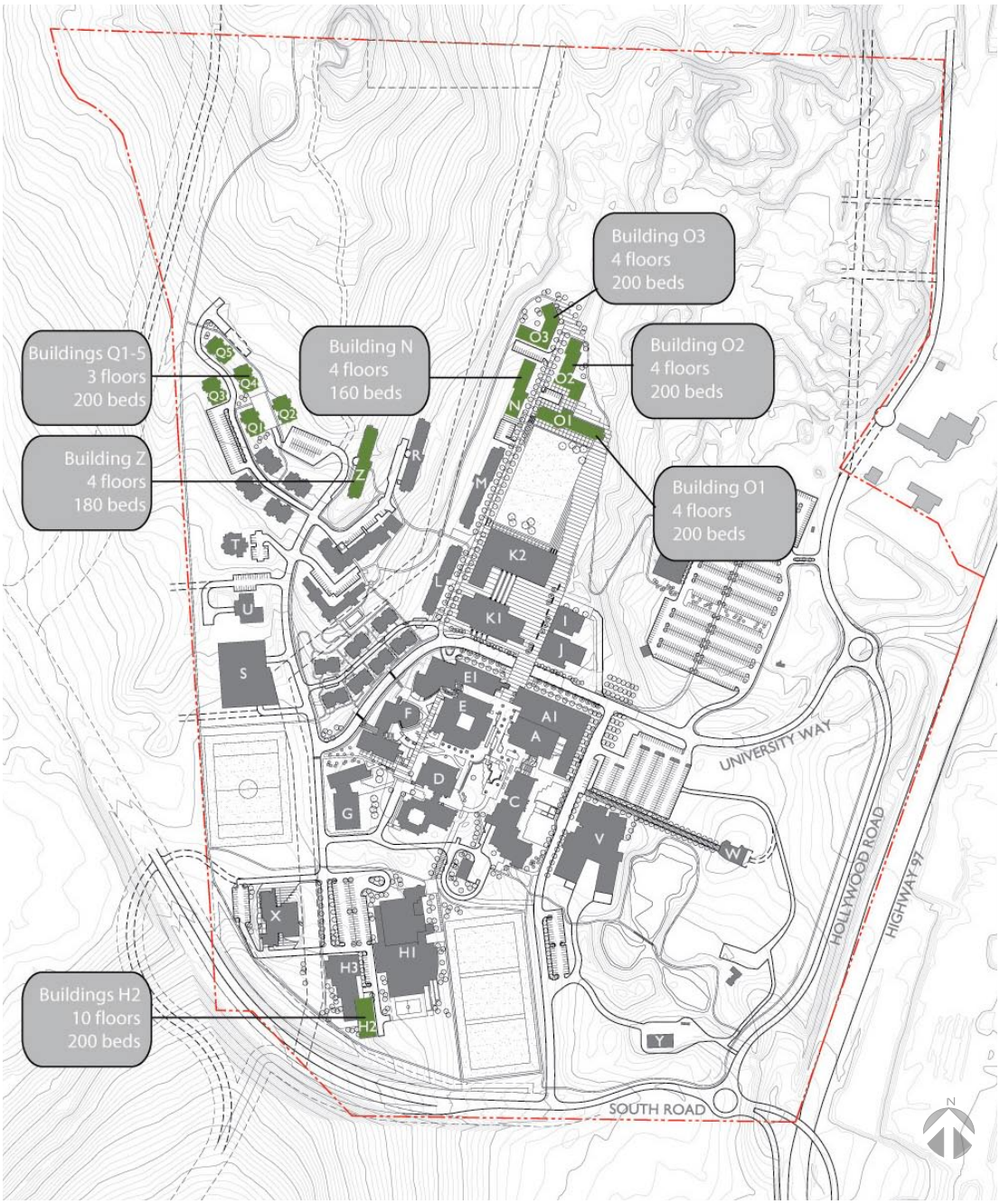
LEGEND
- Existing Parking to Retain
- New Surface Parking
- New Underground Parking
- New Parkade

Parking Plan to 2020

STUDENT RESIDENCES

The Master Plan for UBC Okanagan promotes an active campus life supported by at least 35% of its targeted 7500 students, especially in their first and second years, living in residence by 2020, and at least 40% living on campus post 2020, as demand and budgets allow. Increased student housing is an important sustainability consideration, significantly reducing commuter demand. Students living on-campus also reap tremendous rewards in terms of improved academic success and engagement with their university.

In recognition that the pace of construction of residences will follow demand for residential accommodation, the 2020 Plan adds 1340 new beds in a variety of types and configurations. Post 2020 building sites would allow capacity for approximately 400 more beds beyond that.



Residential Footprints to 2020 with 1340 New Beds

POST - 2020 PLAN

The Master Plan has a time horizon of 2020 and target population and program generally consistent with the Master Program at campus start-up in 2005. Given the uncertainties of student enrollment and funding from many sources, the Master Plan may not be fully built out by 2020; it is unlikely to be completed sooner.

In order to provide confidence in the Master Plan and to ensure that there will be room to expand and develop the campus further after the 2020 Plan is in place, a diagram has been prepared to show longer-term building sites that are consistent with the plan and flexible with respect to the types and functions of future development.

There are a number of locations for future academic buildings in close proximity to the core including two sites on the east side of Alumni Avenue across from the existing sportsfield. The remaining surface parking lot at the southeast corner of University Way and Alumni Avenue is a large site that could readily be developed with underground parking that takes advantage of slopes for access. Any of these sites could also include some university residential development as a use in upper floors. The site immediately east of Building C is another potential future site for an academic building across from the Engineering / Management Building.

There are a number of appropriate university residential sites within the Hilltown precinct, some on current surface lots, some on open sites, and one that would develop the daycare site more intensively with a replacement daycare in or nearby the new building. It is anticipated that post 2020 development will be less reliant on single occupant vehicular access to campus as the residential population grows and transit service expands. In the future it may, as a result, be possible to remove some surface parking to free up building sites. Underground parking may also be more financially feasible in the future.

The lands along Hollywood Road in the northeastern corner of the campus will also likely be developed post 2020 when complementary development has occurred on lands nearer the airport in the Gateway area. These sites could generate revenue for UBC O or even accommodate research related development that would work in partnership with campus-based research and employ students and graduates of UBC O.

Post 2020 Development Potential

IMPLEMENTATION OF MASTER PLAN

Implementation of the Master Plan will involve detailed planning and approval processes with the City of Kelowna and other government agencies. The City will review all development applications for buildings, infrastructure, and site development projects with reference to the comprehensive zoning by-law and related development permit guidelines.

While academic buildings are funded through the Provincial formula process, each building is associated with outdoor open space and infrastructure projects in its vicinity that need to be considered for funding and timely construction. Because the campus is on a sloping site, new buildings must be integrated into surrounding grades at planned not existing elevations or opportunities for unimpeded universal access will be lost. For example, the Master Plan has established elevations along University Way and relocated it to the north for its western end; these elevations are critical to having gentle slopes, without stairs, on University Walk and the Mews.

Consultation with the UBC O community should continue on a regular basis and include updates and opportunities to comment on each project that comes forward for implementation.