

UBC builds community with heart

Point Grey campus gets \$600-million worth of buildings, technology – and a vibrant public square

BY DOUG WARD

The University of British Columbia is midway through a \$600 million growth spurt, giving the campus a new social heart, new housing and shiny new academic facilities with state-of-the-art technology.

An architectural competition is underway to design the new University Boulevard neighbourhood, where a mix of cafes, restaurants, shops and Public Square will give UBC a more dramatic entrance and a vibrant gathering place.

Construction crews will begin digging a hole in a few months for a new underground bus loop on University Boulevard – a loop projected to handle 53,000 transit trips both ways daily.

A new neighbourhood will be developed above it – one of nine neighbourhoods of the University Town project, which will more than double the campus population by 2021.

Linda Moore, the UBC official charged with transforming University Boulevard, uses a famous observation from an American literary figure to describe the uninspiring entrance that currently exists where the boulevard intersects with Wesbrook Mall.

“We’ve been using the little saying of Gertrude Stein: ‘There is no there there’ because look: There is no ‘there’ here.”

But there will be more “there” everywhere on campus. That’s clear from the hardhats and “Construction Access Only” signs that are ubiquitous at UBC.

About 80 per cent of the construction activity has been about building a new generation of institutional buildings, including the Michael Smith Laboratories, the Irving K Barber Learning Centre and the Earthquake Building.

Most days, about 1000 tradesmen, 15 cranes and convoys of dump trucks and other heavy equipment arrive on campus.

“Someone here said that UBC is the biggest construction site west of Toronto,” associate dean Douw Steyn said.

“I have no evidence if this is true, except that there is a heck of a lot of construction here.”

The pace is so constant that UBC has hired a consulting firm to coordinate road closures and signage with the seven major contractors active on campus.

“UBC gets a lot of criticism from neighbourhoods because there are only four major truck routes in and out of the campus,” said Joe Redmond, Vice President of UBC Properties Trust.

“People think the trucks are for building residential. But actually most of the trucks coming here are for institutional buildings.”

Redmond said the new Life Sciences Building, for example, required the excavation 120,000 cubic metres of earth, an amount equal to about 10,000 truck loads.

But both the academic and institutional buildings are about attracting and retaining top students and faculty, said Moore, associate director external affairs for University Town.

“What’s key is that everything we are doing is to support our academic mission.”

Even revamping University Boulevard between Wesbrook and Main Mall.

Moore recalls arriving at UBC as a young English major about 25 years ago and “not realizing that University Boulevard was the front door to the university”.

This is because the gateway to UBC at University Boulevard and Wesbrook has all the architectural drama of a suburban business park.

“We have a sea of pavement that really doesn’t speak to the idea of place – to what we call university-ishness,” Moore says.

“I always think of the new student, bright-eyed and bushy tailed, from somewhere in small-town Canada, staring at the entrance and going: ‘Is this it?’”

Just what the new \$100 million University Boulevard development, adjacent to the Student Union Building, will look like will be decided in an architectural competition launched recently.

Moore is confident the neighbourhood, with its public spaces and shops, will give students a “place to go” – something that has been missing from campus.

“There will be at least five new buildings,” she said. “The whole idea is to create a vibrant collection of uses.

“So that one the square and on the street there will be shops and services.”

There will be rental housing above the shops for students, faculty and staff.

Empire Pool is being relocated to the north side of War Memorial Gym. The new pool will have 50-metre lanes so that swimming competitions can be stage. UBC has asked its architects to relocate and give prominence to Empire Pool’s venerable diving tower. “It’s a UBC icon and we don’t want to lose it,” Moore said.

While UBC is preserving some of its heritage, it’s the newly minted buildings and the wizardry inside them that defines the new campus.

The new academic construction is the result of a move in the late ‘90s by Ottawa and the provincial government to invest heavily in scientific research in post-secondary institutions.

Ottawa’s funding comes through the Canada Foundation for Innovation, which has given UBC \$400 million over the past five years.

UBC vice president Dennis Pavlich said UBC has received more CFI funding than any other Canadian university. “UBC has been unbelievably successful in receiving CFI money.”

In a survey of which public universities have the best scientific research programs, added Pavlich, UBC rated second in Canada and 12th in North America.

Under the CFI grant program, Ottawa puts up 40 per cent of the infrastructure costs of projects chosen by national selection committees, made up mostly of scientists.

The provincial government, through its BC knowledge Development Fund, provides a matching 40 per cent and UBC covers the remaining 20 per cent, often with money from private donors.

Almost all of the CFI funds have gone for scientific research, although UBC was successful in getting CFI money for a project at the Museum of Anthropology, which will enable collections to be accessed digitally and expand the public gallery.

Some of the new facilities are also funded by the BC government’s Double the Opportunity Fund, which seeks to double the number of computing science and engineering students graduating from UBC.

The largest and most expensive of new buildings is the \$172 million, five-storey Life Sciences Centre, new home to the UBC Medical School and a variety of teaching and research facilities for life sciences, and to the Centre for Disease Modeling and the Centre for Blood Research.

The facility is part of the provincial government’s commitment to double the number of graduating medical students to 256 per year by 2010.

The centre will provide links with tele-learning facilities at the University of Victoria and the University of Northern BC. Cameras will allow medical students in Victoria or Prince George to listen to a lecture delivered at UBC and ask questions and vice versa.

The outer shell of the Life Sciences Centre encloses three buildings. It has two open atriums with glass roofs. One of the atriums will house a coffee house and cafeteria. The building has 500,000 square feet with ample laboratory space.

The top four floors of the Life Sciences Centre are labs for medical research and for the life sciences, including biochemistry, molecular biology, microbiology, immunology, anatomy, physiology, zoology and medical genetics.

There is a morgue below ground, holding cadavers for use in medical instruction. A bio-containment facility for the handling of potentially lethal pathogens will also be underground.

“Between the Michael Smith Laboratories and the Life Sciences Centre we will really house a high percentage of researchers who do cellular and microcellular biology, which is at the cutting edge of scientific research,” said bio chemistry Prof. George Mackie.

Mackie said the new buildings were needed because the existing ones “were designed for an earlier era of research and had become obsolete.”

Perhaps, the best-known of these new buildings is the Michael Smith Laboratories, the institutional legacy of Dr. Michael Smith. The \$30 million lab covers 7,500 square meters adjacent to the UBC bookstore.

In 1987, UBC established Canada’s first interdisciplinary biotechnology unit. Smith headed it and recruited the young microbiologists and other scientists. Their offices and labs were scattered across the campus.

It was the late Nobel Laureate’s dream to create an interdisciplinary centre dedicated to genomic research – and to stem the brain drain of top Canadian scientists to the US. That centre now exists and bears his name.

A swirling ribbon of coloured glass stretches across its glass face, representing a DNA sequence.

The Steward and Marilyn Blusson Education Forum is located on the ground floor and is open to the public. A teaching lab will provide outreach to about 2000 Lower Mainland high school students annually. There is also a 100 seat lecture theatre that is electronically linked to other UBC teaching sites, and an atrium.

The second and third floors are dedicated to the research facilities of the former Biotechnology Laboratory.

The lower floor will house the UBC Bioinformatics Centre, where five researchers and about 70 students and lab workers will integrate computers, software tools, and databases to address biological issues related to genomics. The Michael Smith Laboratories represents the UBC component of the Centre for Integrated Genomics, a collaboration with the BC Cancer Agency.

The \$68 million Irving K Barber Learning Centre will retain the heritage core of the iconic Main Library, while adding a new building and renovated floor space. The Learning Centre and the glass-encased Koerner Library directly across from it will make up the academic heart of the campus.

The centre – geared with wireless technology – will offer a new robotics driven automatic storage and retrieval (ASR) system.

ASR technology has been used by a variety of industries for more than 30 years. Libraries have turned to ASR over the last 15 years to help house library collections, including print materials, microforms, videos and artifacts.

Users retrieve materials from the system by making a request through the library's online catalogue. Using the book's bar code as the locating device, the robotic mini-load crane identifies the bin that holds the requested item and delivers it to the circulation desk. A library worker retrieves the requested item from the bin and holds it for pickup. The entire retrieval process takes about two minutes.

The idea behind the Learning Centre is to turn the Main Library into a leading-edge, advanced distance-learning facility, accessible to online users throughout the province. People will be able to locate books and receive materials without having to physically go there.

The two wings of the Main Library will be demolished and along with them, the stacks where generations of UBC students roamed.

Over the next decade, less than half of the library's acquisitions will be in digital format. The library will be out

of space to house print material within the next two years. But with space for more than 1.4 million volumes, ASR will provide growth area for the physical collection for at least 15 years.

The Earthquake Engineering Building will contain shake tables and test monitoring systems, and will allow engineers to assess the seismic capability of buildings and structures. Scale models of buildings will be placed on the shake table and subjected to motion. The building on the East Mall is designed so pedestrians can watch tests being conducted.

The \$8.9 million Aquatic Ecosystems Research Laboratory, expected to open next spring, conducts research on marine life and economies around the globe. It has an "immersion room" that allows researchers to examine three dimensional computer models projected on the walls.

"When you are inside it, it's like being immersed inside a modeling system," Steyn said.

The models will deal with all aspects of fisheries, ranging from economic features to species, population and ecosystems.

The new surge in infrastructure investment has been accompanied by the creation of perhaps the most extensive wireless web network in North America, said David Vogt, director of Digital Learning Projects at UBC.

"UBC has taken upon itself to establish a number of wireless nodes right across campus," Vogt said. "There is a dedication to being wireless friendly here and the UBC network is the most advanced in North America, if not beyond.