

University of British Columbia

Undergraduate Life Sciences Teaching Labs

Development Permit



a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

Project: 1420

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Written Description

UBC Undergraduate Life Sciences Teaching Labs

The Undergraduate Life Sciences Teaching Lab project is situated as part of the Bioscience Complex at the corner of University Boulevard and Main Mall, within the Campus Core district as outlined in Map 3-1 Character Districts of the Vancouver Campus Plan Part 3.

The project will demolish the existing Centre Wing and North West corner, renovate the existing North Wing, and add a new East Wing and North West corner. The new North West corner will address the public space at the intersection of University Boulevard and Main Mall, while the new East Wing will complete the quadrangle of buildings within the complex and create a new and expanded courtyard at the heart of the Bioscience Complex. The project will target LEED Gold and an Energy Use Intensity of 310 kWh/m²/yr.

Programmatically, the project will provide a consolidated home for undergraduate students and teaching faculty in Biology, Microbiology & Immunology, Biochemistry & Molecular Biology and Cellular & Physiological Sciences. The project will also include replacement of research, administrative and core services for the Departments of Botany and Zoology. To reinforce the Campus as Living Laboratory, the courtyard will be energized to accommodate social, education and research activities. Access to the courtyard will be from the North West and North East through open breezeways, providing circulation routes to the project which will activate the courtyard and respect existing pedestrian routes.

The demolition of the Centre Wing will remove portions of the exterior walls of the recently renovated West and South Wings. This will require new envelope to be applied to the demolished areas of exterior wall. The South Wing is a concrete framed building with exterior frame and infill panels of white brick and metal framed windows. The West and North Wings are cast in place concrete framed buildings with pre-cast concrete exterior panels and vertical slot windows. The demolition of the Centre Wing will also require the demolished area of the south façade of the North Wing to be enclosed as part of the renovation.

Entry from the North West corner into the biosciences complex will be at grade from Main Mall and University Boulevard. An accessible ramp and stairs will provide access into the new courtyard. The new courtyard levels will be reset to accommodate the high traffic volume of students and faculty accessing Level 1000 of both the north and east wings where the majority of the new seminar rooms and large auditorium are located. Breezeways and canopies will allow for sheltered passage.

The West and East façades of the new East Wing will be clad in aluminum metal panel cladding with high performance curtain wall glazing incorporated in a vertical configuration. At the intersection of the East

and North Wings, above the breezeway, a large bay window signaled by an aluminum frame provides the back drop for small but dynamic social spaces from Levels 2000-3000 with an overlook from Level 4000. This space will accommodate circulation links from East to North and will be clad in high performance curtain wall glazing. Brick will be used at level 1000 to provide a robust base at the ground including the lane and courtyard.

The North West corner will sit above an open public space which provides access to the courtyard and provides an architectural marker for the project. At level 3000, new offices and a multifunction amenity space will be accommodated. The North West corner is also clad in aluminum cladding with high performance curtain wall glazing.

Design Policy Compliance

Given the prominence of the Biosciences Complex on Martha Piper Plaza, the existing North West entrance and built form will be replaced by a new block which completes and holds to, the existing built line of the existing North and West Wings, satisfying the build to line noted within Item 2.3.1.b and illustrated in Map 3-2. It will be an elevated form, containing program at Levels 3000, allowing a new open entrance to the courtyard, at once signifying and anchoring the new project, create a memorable arrival, while activating engagement with the public realm of the Campus. At a total height of 11.7m, the new NW block will reinforce and complete the existing geometry of the Biosciences Complex, while the soffit line, at 3.8m above the Main Mall sidewalk will create an extension of the public realm, through to the courtyard as an outdoor room with positive definition of space, satisfying Campus Design Guidelines 2.3.1.f, 2.3.1.i, 2.3.4, 2.3.5.b.i, ii, iii, iv.

The existing North and West Wings are unified in expression by a highly modeled precast concrete envelope with vertical slot glazing. To contrast this grey, heavy massing, the NW corner will incorporate a cantilevered corner and be clad in aluminum metal paneling with high performance glazing. This metal panel cladding will be sympathetic to the colouring of the concrete, while connecting back to the metal panel cladding of the East Wing. Glazed reveals will separate and animate the connections of North West block to the North and West facades, while the elevated massing will provide a lightness of form in contrast to the heavy massing of the existing concrete edifices. This will satisfy Campus Design Guidelines 2.3.5.b.iii, vii, 2.3.5.d, 2.3.6, 2.3.7.

The project will satisfy Campus Design Guidelines 2.3.9 by providing Rain Protection at the North West outdoor room, the North East entrance breezeway and by providing a canopy on the new East Wing which addresses the outdoor space of the courtyard. This canopy will incorporate a large gutter which will artfully guide rainwater to the courtyard planting and stormwater management system. This will ensure all entries to the project are protected, the student social and gathering space are protected and Martha Piper Plaza is afforded Rain Refuge below the elevated North West corner.

The new Biosciences Courtyard will create an Academic Commons which will provide social spaces, opportunities for class teaching and will accommodate existing research functions within new facilities. The social activities will be linked to the open circulation at the North East and West of the courtyard and connect directly to the circulation spaces serving the teaching spaces at Level 1000. Teaching opportunities will be provided for biodiversity classes, plant physiology labs and planted demonstration landscapes. The planting will be developed in collaboration with Faculty to create a carefully curated Botany showcase.

UBC Biological Sciences
Landscape Narrative – DD
12/03/2015

The UBC Biological Sciences Complex sits at the southeast corner of a prominent campus intersection – Main Mall and University Boulevard. This intersection is considered the symbolic academic heart of campus.

The enlarged courtyard space, which is intended to be viewed from the intersection of Main Mall and University Boulevard, is created through the demolition of the existing centre block and the addition of the New East Wing. The space is poised to serve as an important and engaging learning landscape and social hub for the faculty and students of Botany, Zoology, Microbiology and Physiological Sciences as well as the academic community at large.

The courtyard space is conceived of as a ‘Botany showcase’ that will carry on the current ‘spirit’ of the existing garden courtyard but within a more organized framework that supports the key objectives for the space: Research, Education, and Social opportunities. The primary research area is located at the south end of the courtyard and is designated for aquatics research. This area is physically and visually separated by a north facing wall which offers an exciting opportunity for creating a living wall and engaging backdrop for the courtyard along this edge. Education and social spaces are mixed throughout the courtyard in a variety of sizes to provide opportunities for large gatherings, outdoor classes, or quiet study. Furnishings may include a large community table, seating steps, moveable café tables and chairs and integrated benches located within garden spaces.

The courtyard expression is inspired by organic forms found in nature and establishes the framework for defining circulation patterns, green spaces, and the various social and learning areas. The paving pattern, achieved through saw cuts in cast-in-place concrete, is inspired by the forms of microscopic plant cells and seamlessly extends into the building along the west edge. Planting areas are maximized to support the goals of the Botany Department to establish a permanent collection of plant materials for educational and academic purposes as well as a working/experimental collection for on-going learning opportunities. The provision of experimental raised planter beds would further support academic goals by providing an outdoor space for rotating student and faculty projects and demonstrations.