

sprinkler protected glazing - existing

Abbreviations

- = above finished floor = centre line
- c/w = complete with elev = elevation eq = egual
- exist = existing = exterior int = interior
- max = maximum min = minimum = not applicable na
- = on centre = owner supplied contractor installed osci
- osoi = owner supplied owner installed
- rec = recessed

= not in contract

- reqd = required rm = room
- sim = similar tme = to match existing

= with

- t/o = top of
- typ = typical = unless noted otherwise
- u/s = underside = verify in field

Written description

The Beaty Addition is a proposed addition of approximately 4,100 GSM (44,130 GSF) to the existing Beaty Biodiversity Centre – an academic facility designed by Patkau Architects and completed in 2009 which, in addition to administration and research functions, accommodates the Beaty Biodiversity Museum. The existing Centre is centrally located on campus, along Main Mall, the university's primary north-south spine. Upon completion, the Beaty Biodiversity Centre became home to the Beaty Biodiversity Museum at UBC and biology-related subsets of the Faculty of Sciences Zoology and Botany departments. Since 2009, the Museum has become an important landmark for the University and a one-of-a-kind natural sciences exhibition space. The Beaty Biodiversity Centre is rapidly expanding and hiring new faculty, launching new programs, and building new partnerships. The Centre's addition proposes to expand the existing research centre and add a museum storage facility that will enable it to qualify as an official BC fossil

The Biodiversity precinct is characterized by bar buildings, which are placed to form edges to exterior courts. The landscape design of these existing open areas provides a deliberate visual and functional representation of the principles of biodiversity. The Addition will provide office and research space to augment the existing research programs and house the new Conservation Science Initiative. Below grade, a contiguous expansion of the Collections and Museum facilities will accommodate growth and program

The Biodiversity Centre site as a whole is approximately 11,350 sm in area. The existing buildings occupy 2,600 sm of the site area above grade, increasing to 4,600 sm below grade. Fairview Grove, a stand of mature Cedar and Douglas Fir trees, extending south and east from the existing Museum Lantern occupies 950 sm at the southwest of the site. The remaining unbuilt area is limited. Approximately 1,500 sm in the south court has been identified as the most suitable area for the Addition. This project development site is however tightly constrained on all sides. The site is to the south of the existing research offices wing. It is currently planted and slopes down to bring light into offices at the existing basement level. The CEME lab building to the south is an unsprinklered industrial use, which places strict limits on spatial separation to new neighbours as well as allowable area of unprotected openings. The campus District Energy System infrastructure travels across the project site beneath the pedestrian laneway. The laneway is an important east-west campus route for both pedestrian and bicycle traffic.

The existing building contains 11,500sm of academic space on a site of 11,350sm for an approximate FSR of 1. The Addition is tasked with accommodating an additional 4,100sm of space on a site area of 1,500sm, for a FSR of 2.7. Put another way: the addition adds 35% more space to the existing building, on 15% of the overall site area. Massing is a significant challenge. The functional program for the Addition consists of three primary groupings: space for researchers, space for museum collections

& supporting functions, and meeting & gathering spaces shared by both groups. The research space is modular and repetitive, lending itself to an efficient stacking layout on levels. Museum expansion spaces are adjacent to the existing collections and back of house areas at the basement level, while spaces shared by the two functions occupy the ground floor and contribute to a public face for the Addition.

The proposed massing has six storeys above grade with one basement level and rooftop mechanical enclosure. It is sited to preserve daylight access to the existing south facing offices, limit the relocation of existing spaces and preserve an open South Court and existing east-west cross campus connection.

The basement level provides an efficient and functional expansion of museum facilities, with upper floors in a perpendicular bar that completes the west side of the reconfigured South Court and allows efficient stacking of research program. The Beaty Biodiversity Centre and Museum supports its strong internal community through opportunities for casual meeting and interaction in the existing building. The new Addition connects to these existing patterns of circulation and extends them. New program spaces are located adjacent to the existing spaces they augment. New connections are made at vertical circulation nodes to promote stair use and social interaction.

The Addition provides sorely needed expansion space. Space within the existing Centre is in significant demand. Care has been taken to locate the Addition's connections to limit the displacement of existing spaces which will have to be re-housed in the

Design policy compliance

The project has been designed in accordance with the Vancouver Campus Plan Part 3 requirements for academic projects. The project site is in the Campus Core District, and is therefore subject to additional requirements outlined in section 3.1 of the Campus Plan Part 3 which are addressed by the design as follows.

The project is an addition to an existing building. As such, the design is considered for compliance with the Campus Plan as a single composition of new and existing components.

The campus pattern of blocks and courtyards is to be reinforced. By providing a new west edge to a preserved south court, the Addition builds on the 'edge and court' massing of the existing Biodiversity Precinct buildings, and provides a defined 'moment' along the east-west pedestrian and bicycle route. While having a green roof over museum collection space is not optimal, the extended basement level keeps all museum functions on one floor and preserves part of the project site for a pollinator garden meadow learning landscape, co-planar with the east-west connection across campus. The proposed addition is sited to avoid placing limitations on future development of CEME Labs site, and in consideration of the potential for new exterior spaces created by that eventual redevelopment.

The Addition needs to form a coherent expansion of the Biodiversity Precinct. While limited development site and program to be accommodated results in a tower form, a taller mass in this location is responsive to the verticality of Fairview Grove and acts as a counterpoint to the existing low-slung masses. In line with recommendations from the Campus Plan, the new taller mass of the addition forms a setback from the existing three storey research building at the fourth floor of the Addition, and preserves light access to the existing central court of the Biodiversity Precinct.

At 23.4m the addition is below the preferred 28m in height for projects along Main Mall, and set back from existing Museum 'lantern' by 17.5m to respect the 5m minimum setback from Main Mall fronting facade. In line with the Campus Core Materials Palette, the primary cladding material is white brick, in the same masonry unit size and bond pattern as the existing building. The rooftop mechanical screen material is aluminum safety tread material matching the existing building. Glazing is non-reflective, and supported on dark curtain wall framing. Secondary materials include white fibre

cement planks at solar shading devices, and natural colour concrete panels at grade within the lower court.

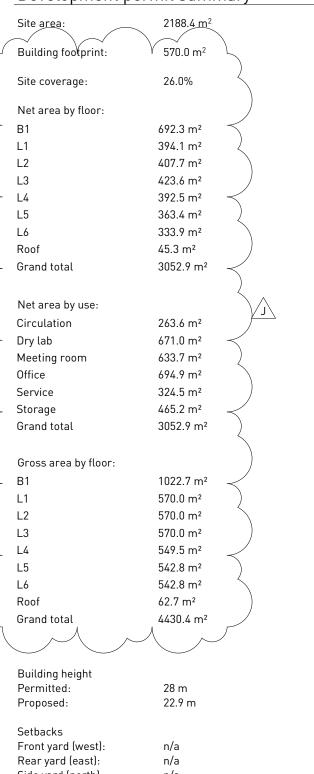
CPTED description

and larger facility is cared for.

Amenity spaces on the ground floor and the research labs above overlook Fairview Grove to the west, while offices and the southern stair overlook the pollinator garden and cross campus connector to the east. The Addition takes advantage of the existing Centre's entry points and provides exterior doors for exiting only.

The lower courtyard is flanked by offices and other regularly occupied spaces along the entirety of the north and south edges for natural surveillance. Access to the courtyard will be controlled through a highly visible exterior stair at the east end and through the basement level of the Addition at the west end. The exterior stair runs parallel to the offices along the north and south with open mesh guards for maximum visibility. The lower courtyard's landscape will be low maintenance to demonstrate the space

Development permit summary



n/a Side yard (north): Side yard (south): Parking spaces

Permitted: Proposed: 1 accessible, 1 service

Loading spaces Permitted: Existing: Proposed; Bicycle parking (long-term) $0.6 \text{ to } 0.8 \text{ per } 100\text{m}^2 \text{ of GFA} = 27 \text{ to } 35$ Permitted: Existing: Proposed: Bicycle parking

(short-term) 4 per $100m^2$ of GFA = 177 Permitted: Existing: Proposed:

Permitted: Max 3.5 net area 2.0 Proposed

Development permit variances

Bicycle parking (long-term): A variance is requested to provide 20 longterm bicycle parking spaces in lieu of 27.

Bicycle parking (short-term): A variance is requested to provide 10 + 6 = 16short-term bicycle parking spaces in lieu of 183. The existing Centre has 82 existing short-term bicycle parking spaces.

The bicycle parking variances are requested to better correlate with the proposed Addition's future users. The proposed Addition will be populated by faculty, staff, postdoctorates and graduate students and provide 708.4 sm of new office space. The same users that occupy the offices will use the meeting rooms and dry labs.

Project team

Drawing list - architectural **Project Manager** DP G0.01 Project information Shawn Rodgers DP G0.02 Gross area plans **UBC Properties Trust** 200 - 3313 Shrum Lane DP G0.03 Shadow analysis Vancouver, BC V6S 0C8 DP G0.04 Photographs T: (778) 987-8965 DP G0.10 Site plan E: srodgers@ubcproperties.com Architect DP A1.00 Floor plan - B1 Brian Wakelin, MAIBC, MRAIC, LEED/AP DP A1.01 Floor plan - L1 Martina Caniglia, AIBC DP A1.02 Floor plan - L2 and L3 PUBLIC: Architecture + Communication DP A1.03 Floor plan - L4 and L5 1495 Frances Street DP A1.04 Floor plan - L6 and roof Vancouver, BC V5L 1Z1 T: (604) 738-4323 E: brian@publicdesign.ca DP A2.00 **Building elevations** E: martina@publicdesign.ca DP A2.01 Building elevations Civil Engineer DP A3.00 Building sections Chris Hendriksen DP A3.01 Building sections Thomas Schwabenbauer 1100 - 111 Dunsmuir Street Vancouver, BC V6B 6A3 Drawing list - civil T: (604) 696-8000

Landscape Architect Drawing list - landscape Hapa Collaborative 403 - 375 W 5th Avenue L0.00 Vancouver, BC V5Y 1J6 L0.01 T: (604) 909-4150 L0.02 E: jfry@hapacobo.com

Structural Engineer William Johnston Chris Jacques 1000 - 840 Howe Street Vancouver, BC V6Z 2M1 T: (604) 736-5329 E: william.johnston@wsp.com E: chris.jacques@wsp.com

E: cmcbride@hapacobo.com

E: chris.hendriksen@stantec.com

Joseph Fry

Chris McBride

E: thomas.schwabenbauer@stantec.com

Mechanical Engineer Patrick Stewart AME Group 200 - 638 Smithe Street Vancouver, BC V6B 1E3 T: (604) 684-5995 x107 E: patrickstewart@amegroup.ca

Electrical Engineer Andv Su Richard Wu AES Engineering 950 - 505 Burrard Street Vancouver, BC V7X 1M4 T: (604) 695-2721 E: andy.su@aesengr.com E: richard.wu@aesengr.com Utilities plan

Cover page Urban landscape rationale Design principles L0.03 Tree management plan L1.01 Concept plan | Level 1 L1.02 Concept plan | Basement level L1.10 Overall materials plan L1.11 Materials plan | Level 1 L1.12 Materials plan | Basement level L1.21 Layout plan | Level 1 Layout plan | Basement level L1.22 L1.31 Grading plan | Level 1 L1.41 Planting schedule | Level 1 L1.42 Planting plan | Level 1 Planting schedule | Basement level L1.44 Planting plan | Basement level L2.01 Sections L2.02 Sections L3.10 Paving details L3.20 Site furnishing details L3.30 Walls and stairs details L3.40 Planting details

Drawing list - electrical

Site plan - lighting

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Biodiversity Centre Addition

2212 Main Mall, Vancouver, BC

PROJECT CODE 2121 SCALE 1:50

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UBC Beaty

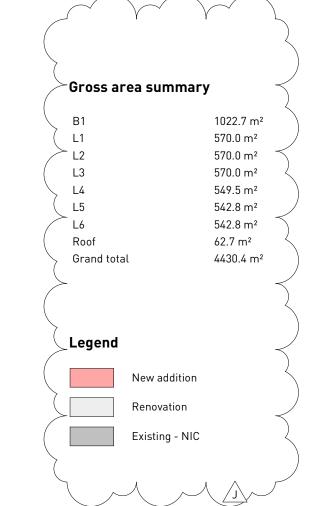
Project information

DP G0.01

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UBC Beaty **Biodiversity Centre** Addition

2212 Main Mall, Vancouver, BC

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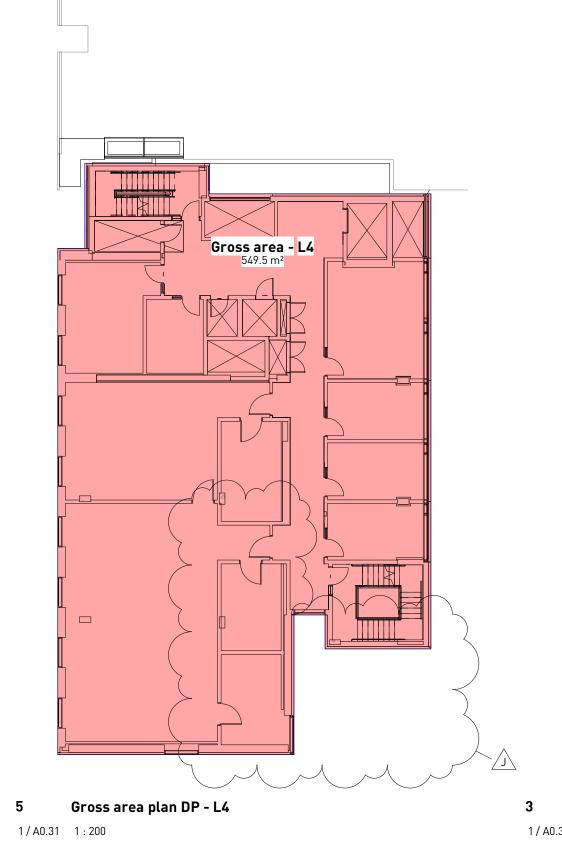
As indicated

Gross area plans

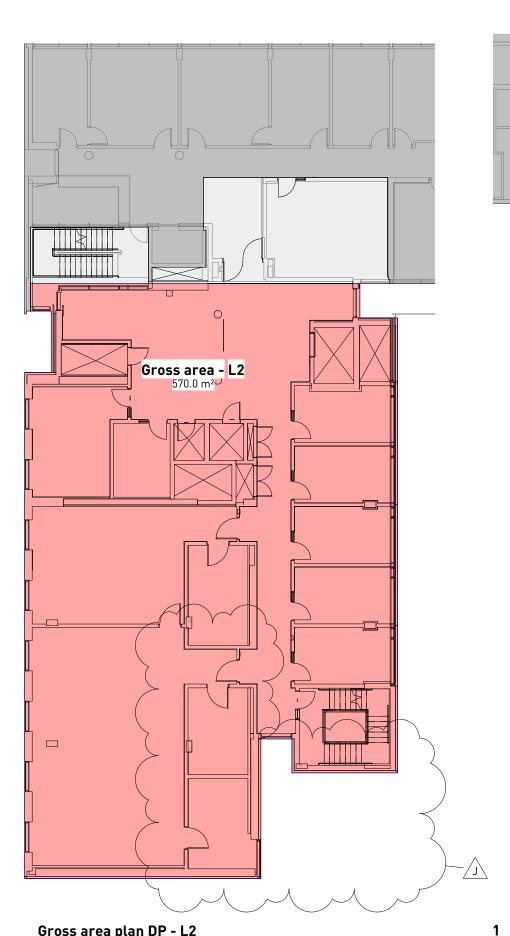
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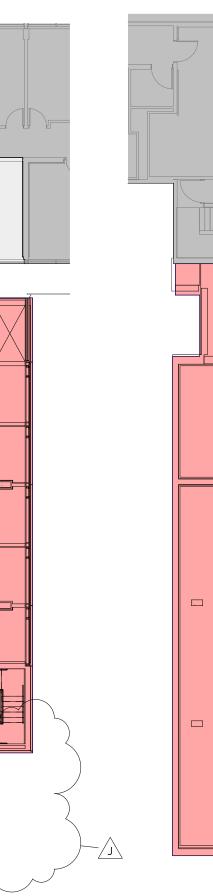


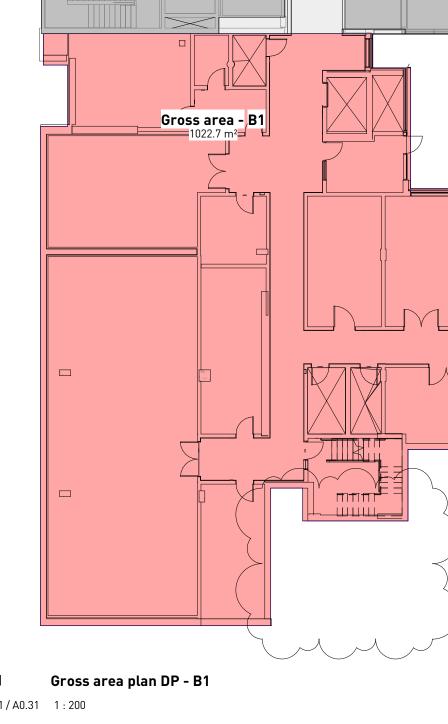




Gross area - L5 542.8 m²



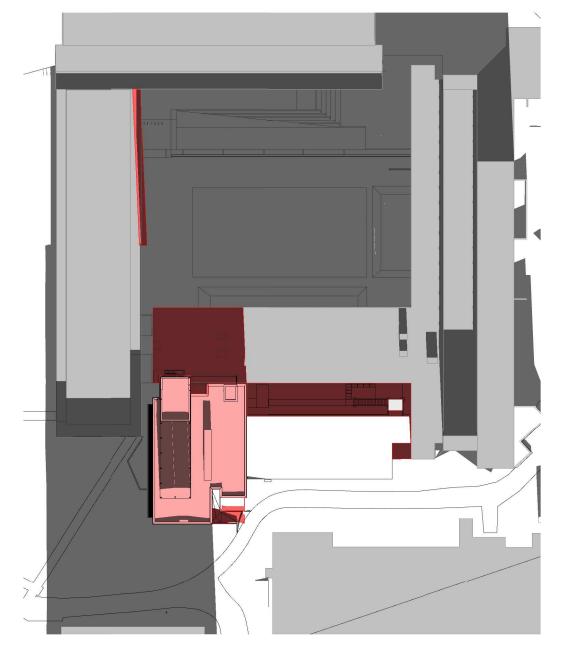




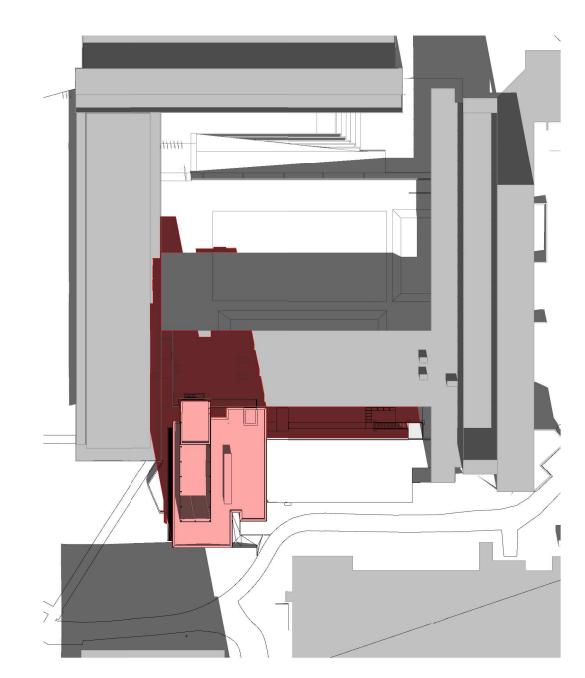
Gross area plan DP - L6

1 / A0.31 1 : 200

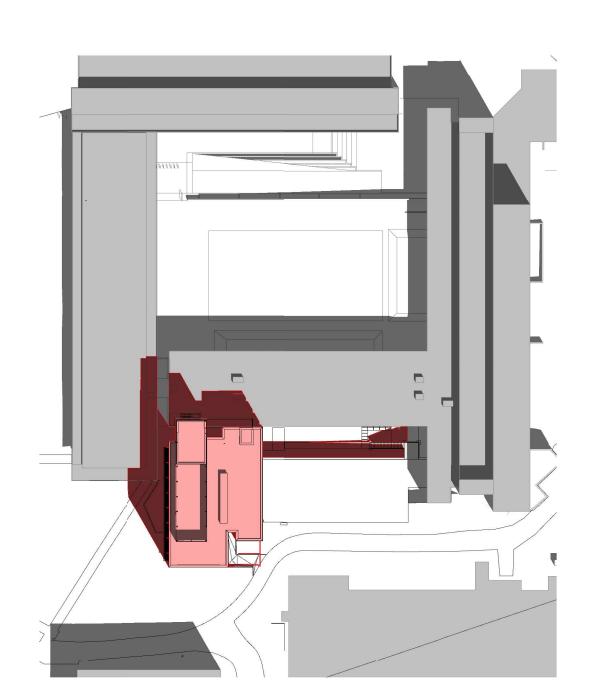
Gross area - roof



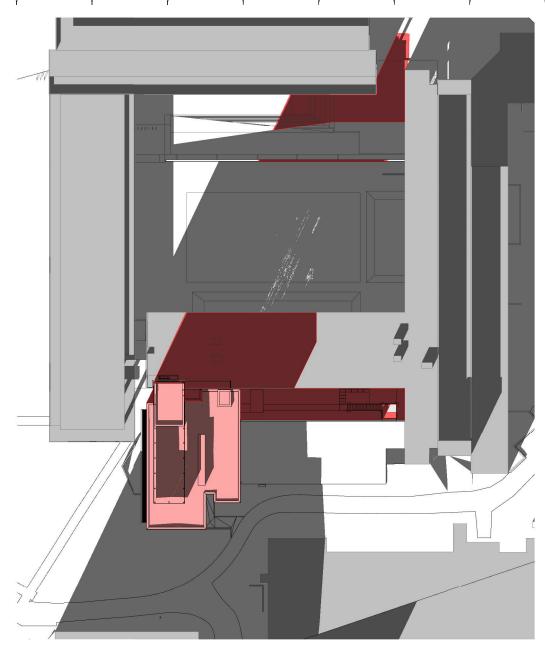
Winter solstice at 10am



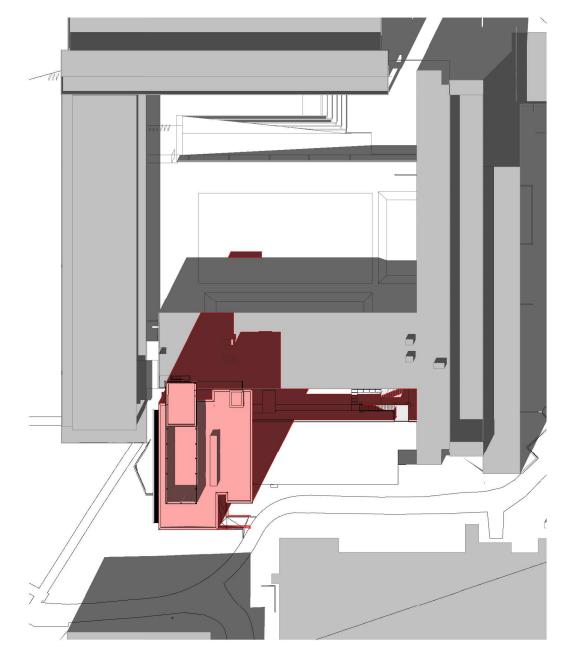
Spring equinox at 10am



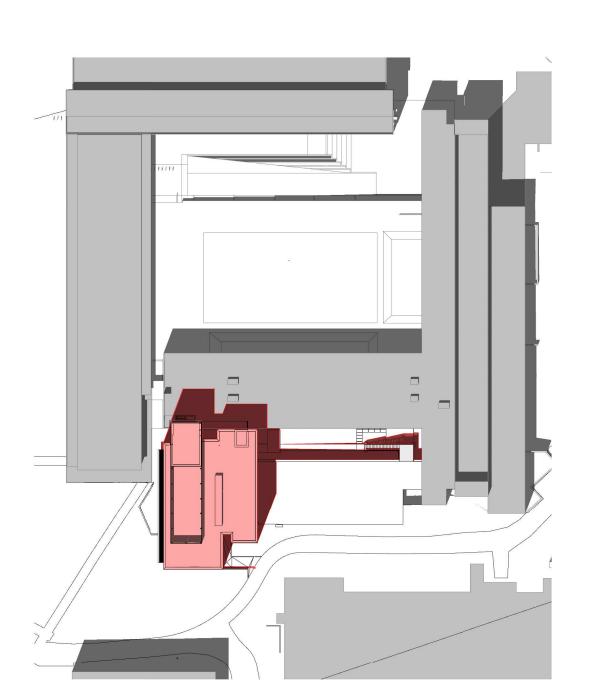
Summer solstice at 10am



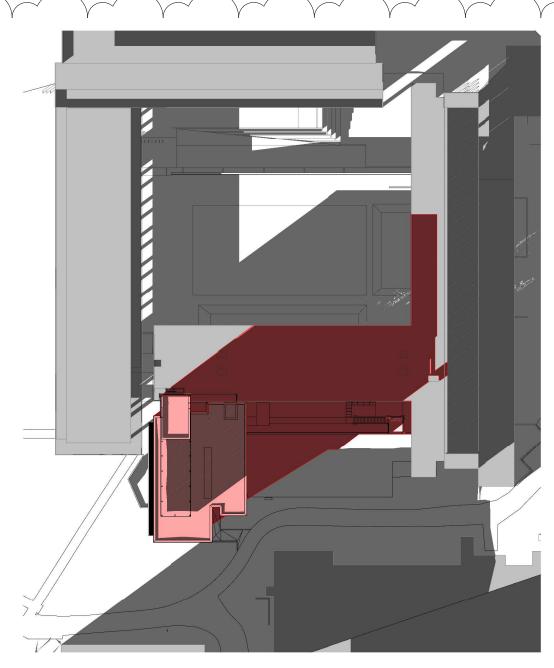
Winter solstice at 12pm



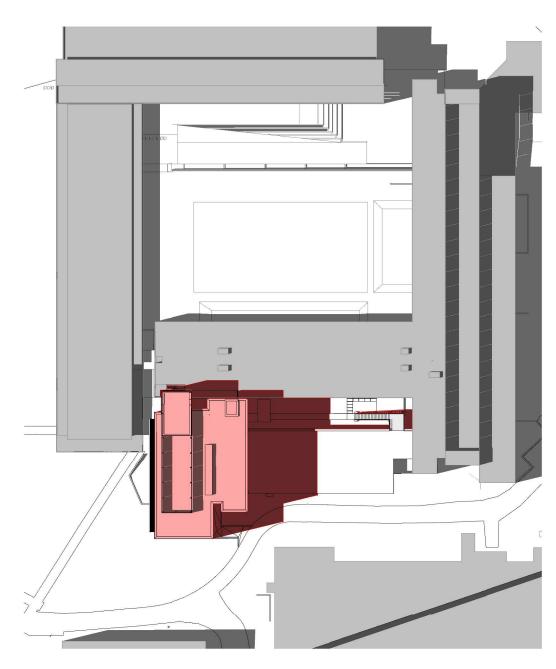
Spring equinox at 12pm



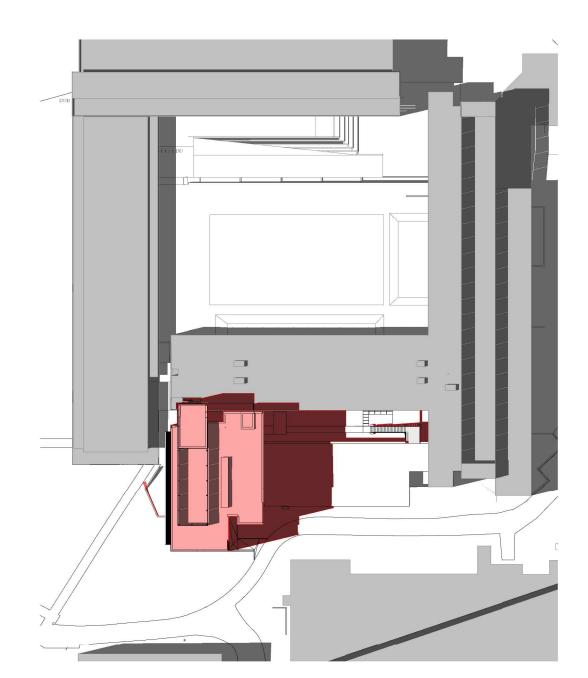
Summer solstice at 12pm



Winter solstice at 2pm



Spring equinox at 2pm



Summer solstice at 2pm

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UBC Beaty **Biodiversity Centre** Addition

2212 Main Mall, Vancouver, BC

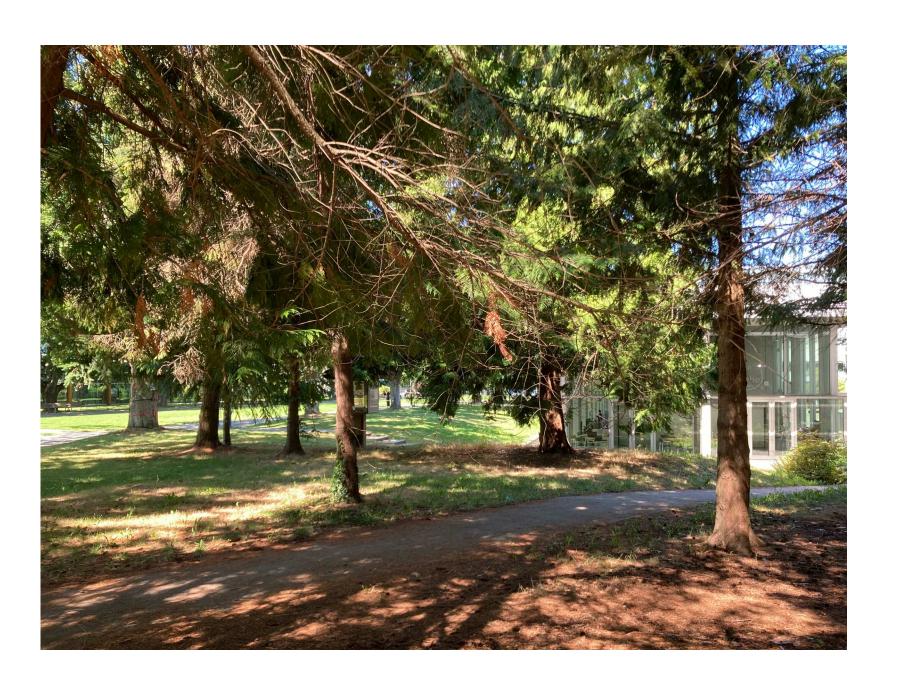
PROJECT CODE
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SCALE
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Shadow analysis

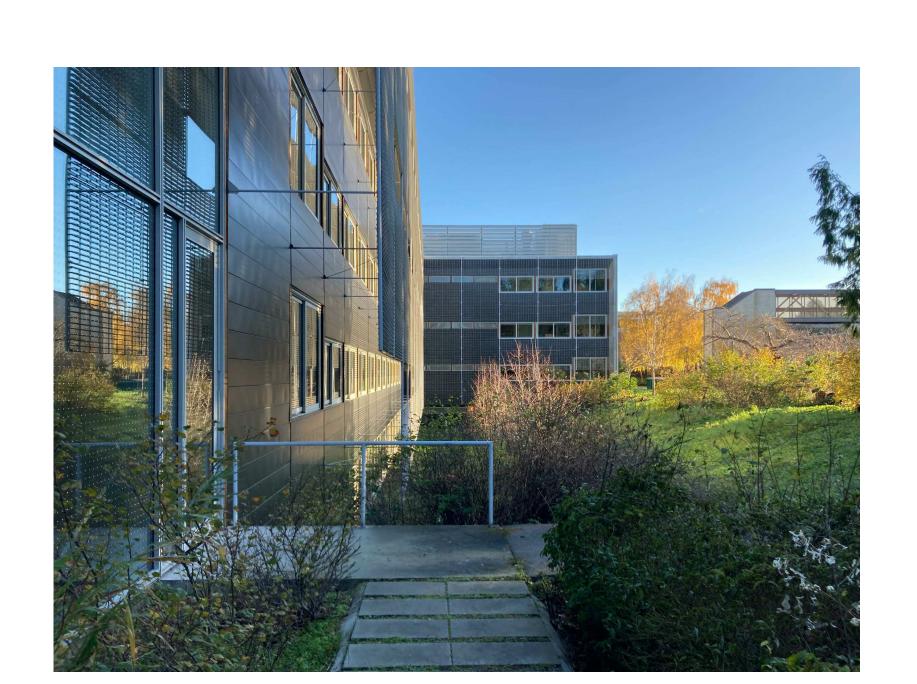
DP G0.03



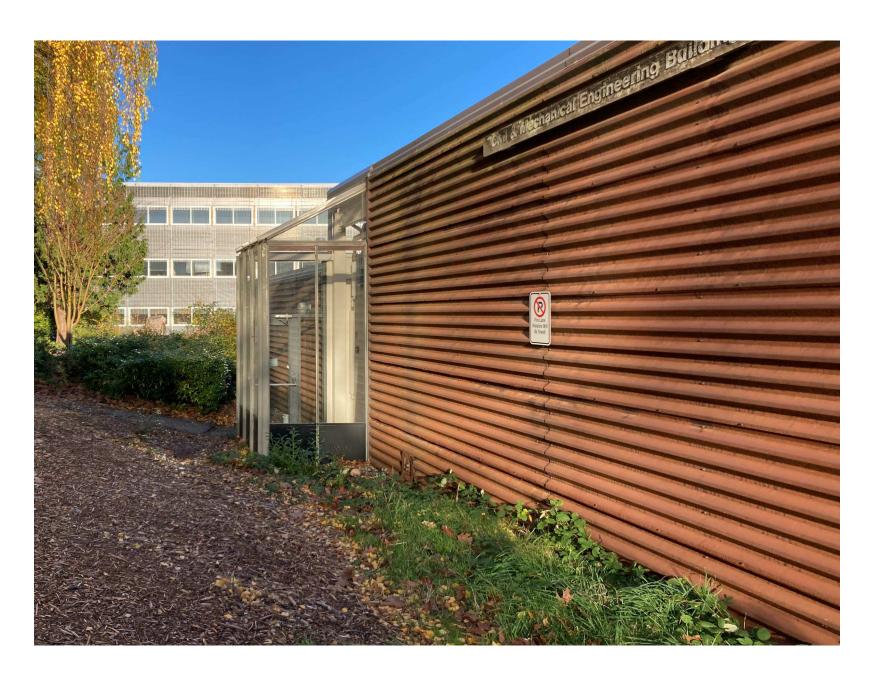
1. Looking east at project site from Main Mall



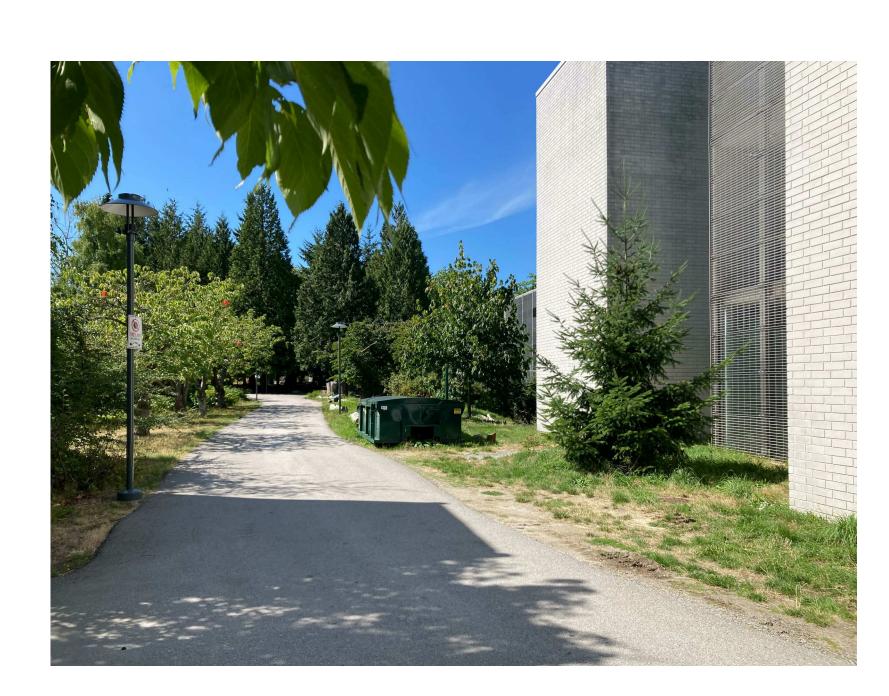
4. Moving east on pedestrian path from Main Mall



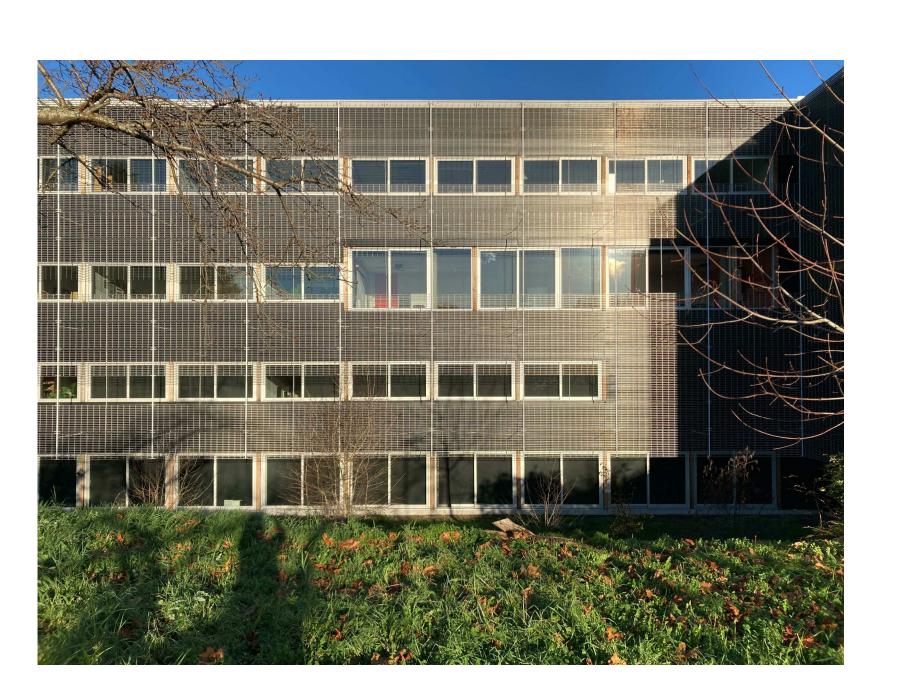
7. Looking east at project site from the Beaty Biodiversity Museum



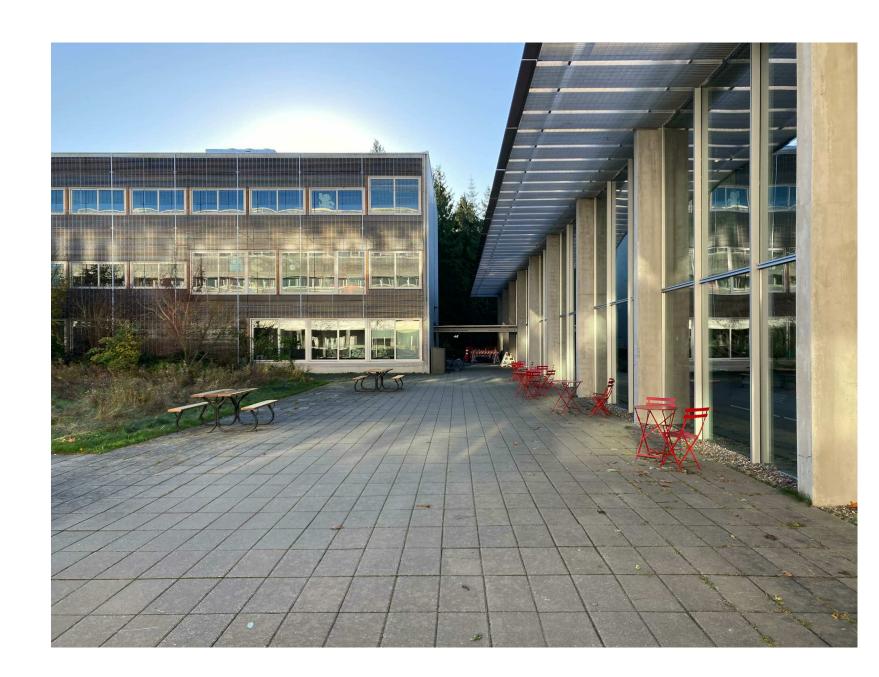
2. Looking north at project site from Civil Mechanical Engineering Building



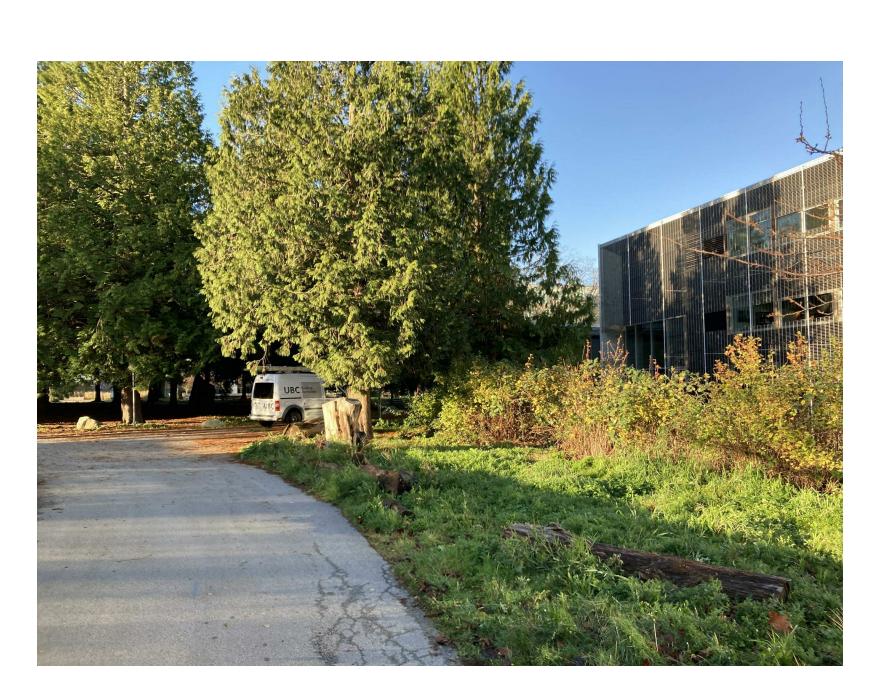
5. Moving west on pedestrian path from East Mall



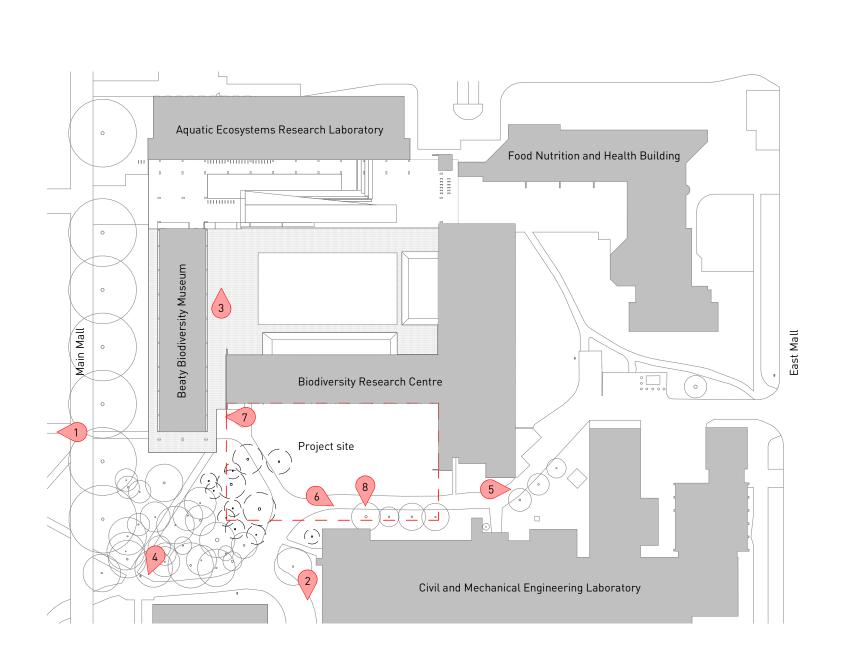
8. Looking north at project site from pedestrian path



3. Looking south at project site from existing courtyard



6. Moving west on pedestrian path from East Mall



Key plan

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UBC Beaty **Biodiversity Centre** Addition

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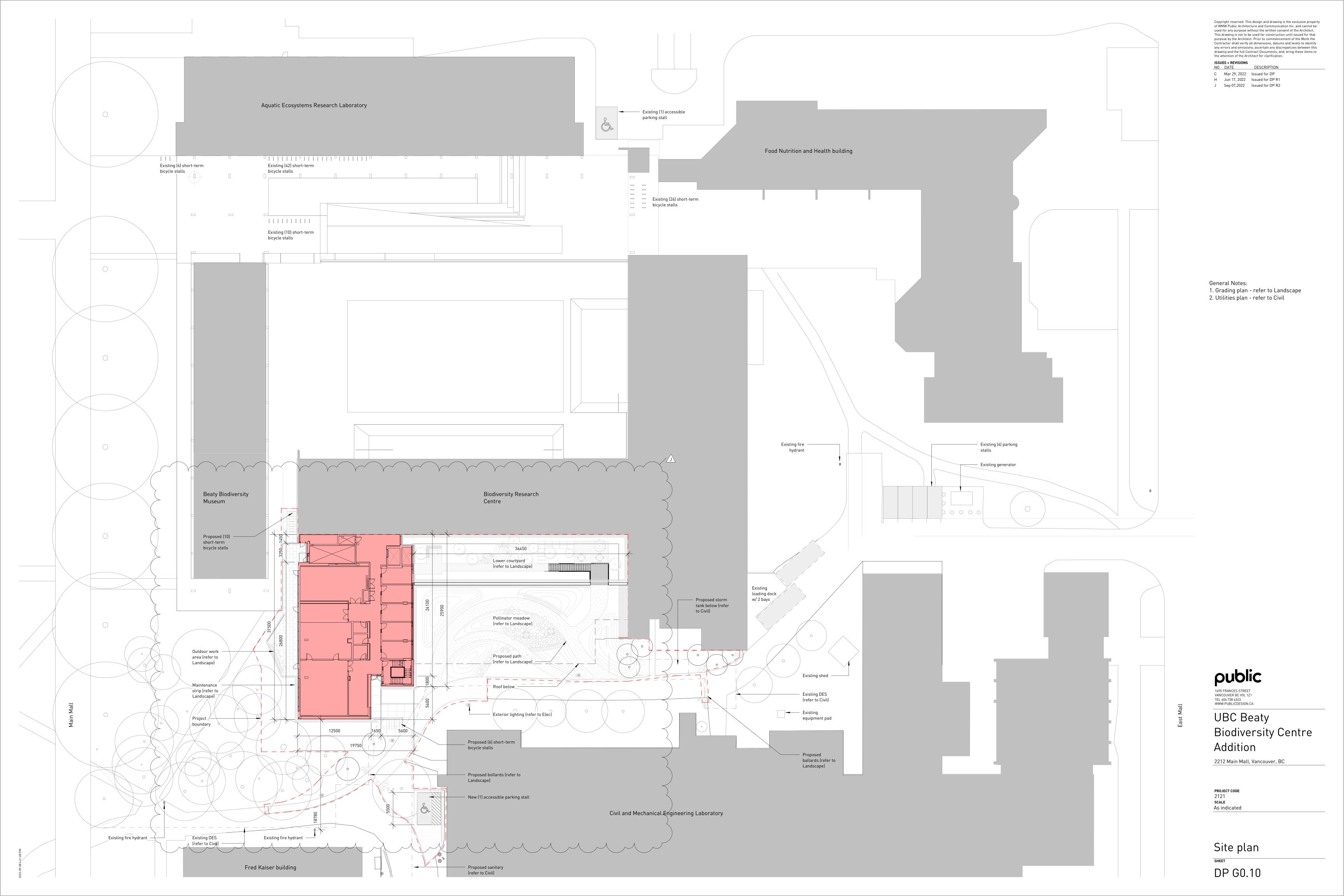
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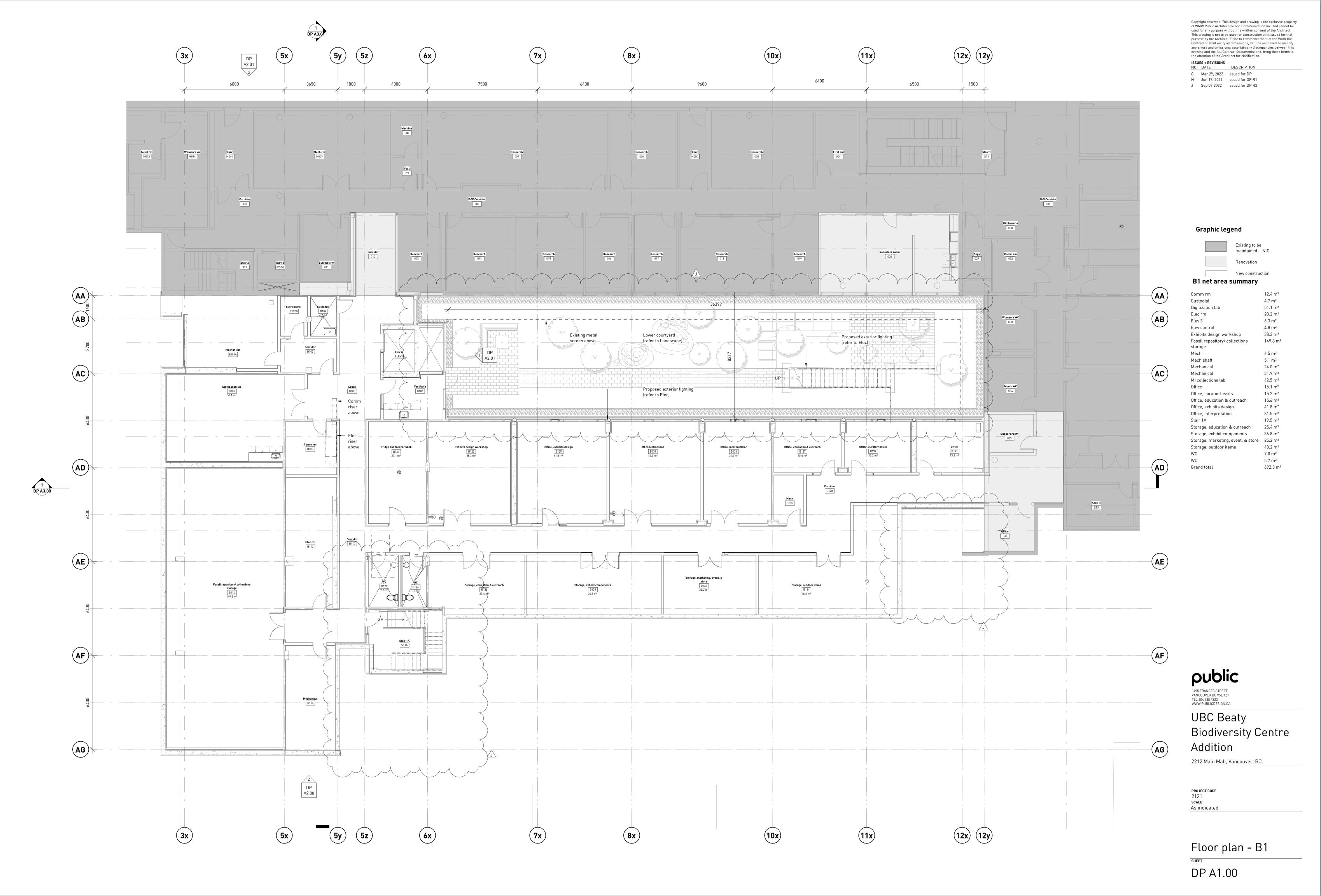
2212 Main Mall, Vancouver, BC

PROJECT CODE 2121 SCALE 1:1000

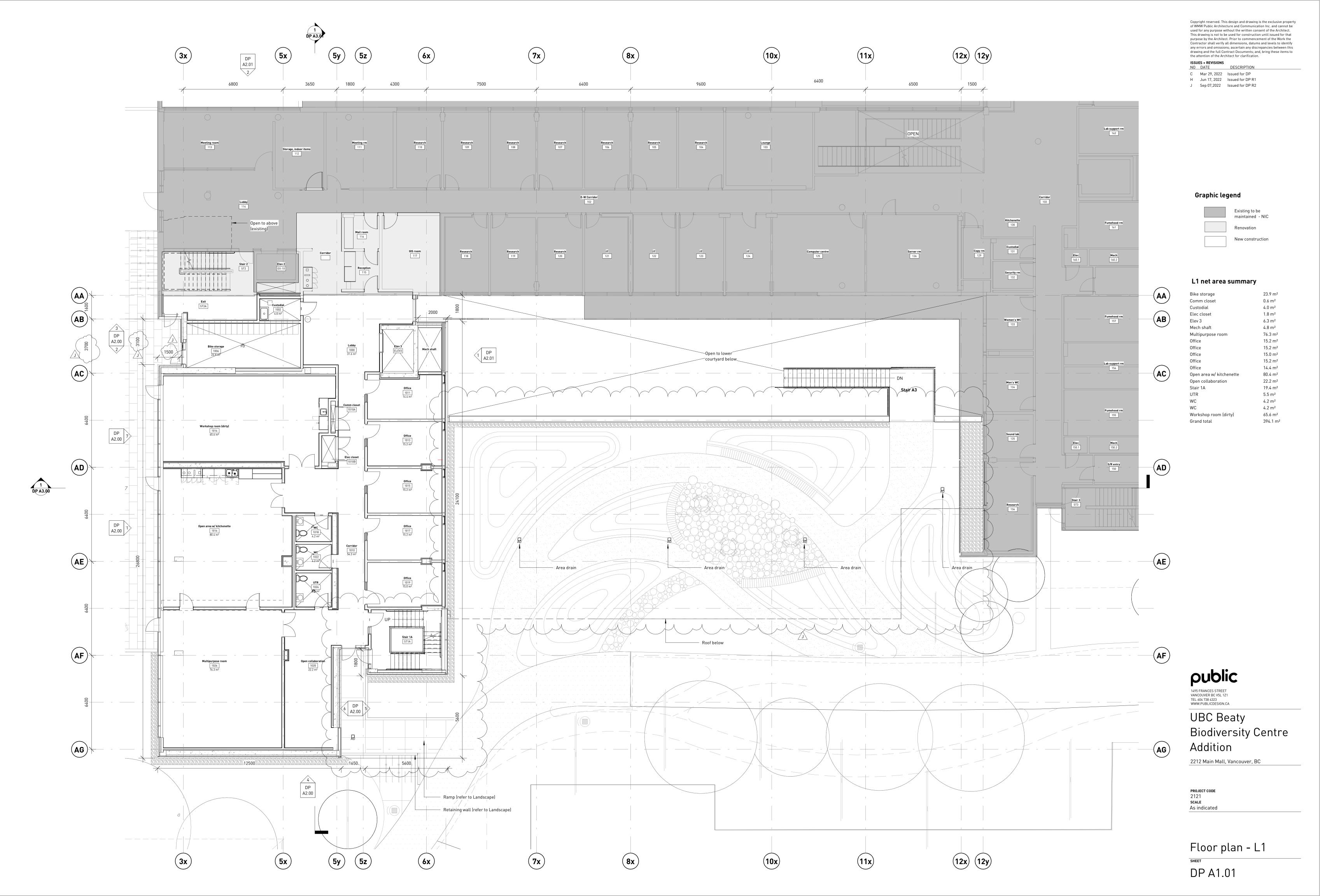
Photographs

DP G0.04

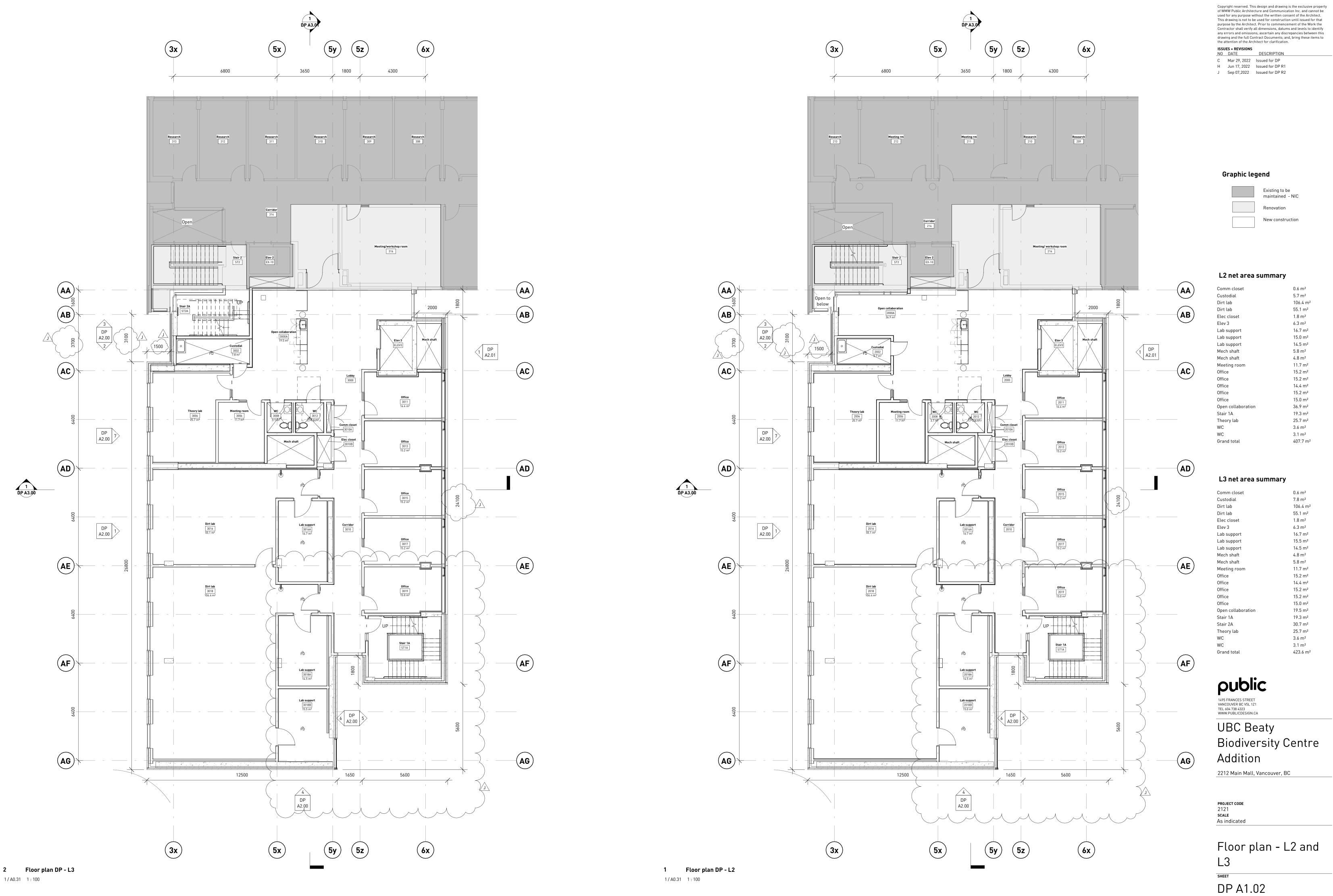


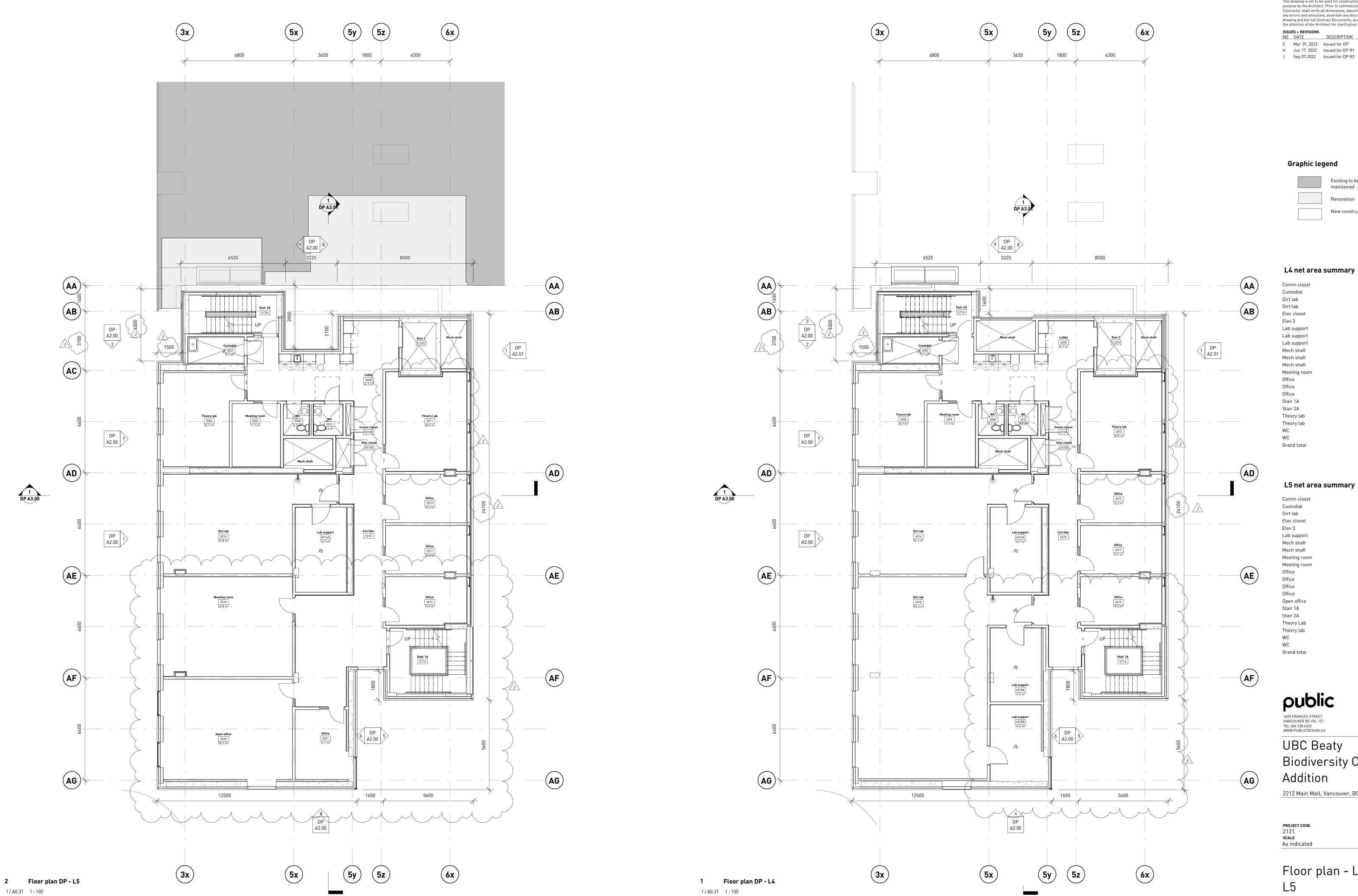


022-09-08 4:3



122-09-08 4:





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Existing to be maintained - NIC New construction

0.6 m² 5.7 m² 106.4 m² 55.1 m² 1.8 m² 6.3 m² 16.7 m² 14.5 m² 15.5 m² 4.8 m² 5.8 m² 7.3 m² 11.7 m² 15.2 m² 15.0 m² 15.2 m² 19.3 m² 13.1 m² 25.7 m² 30.5 m² 3.6 m² $3.1 \, m^2$ 392.5 m²

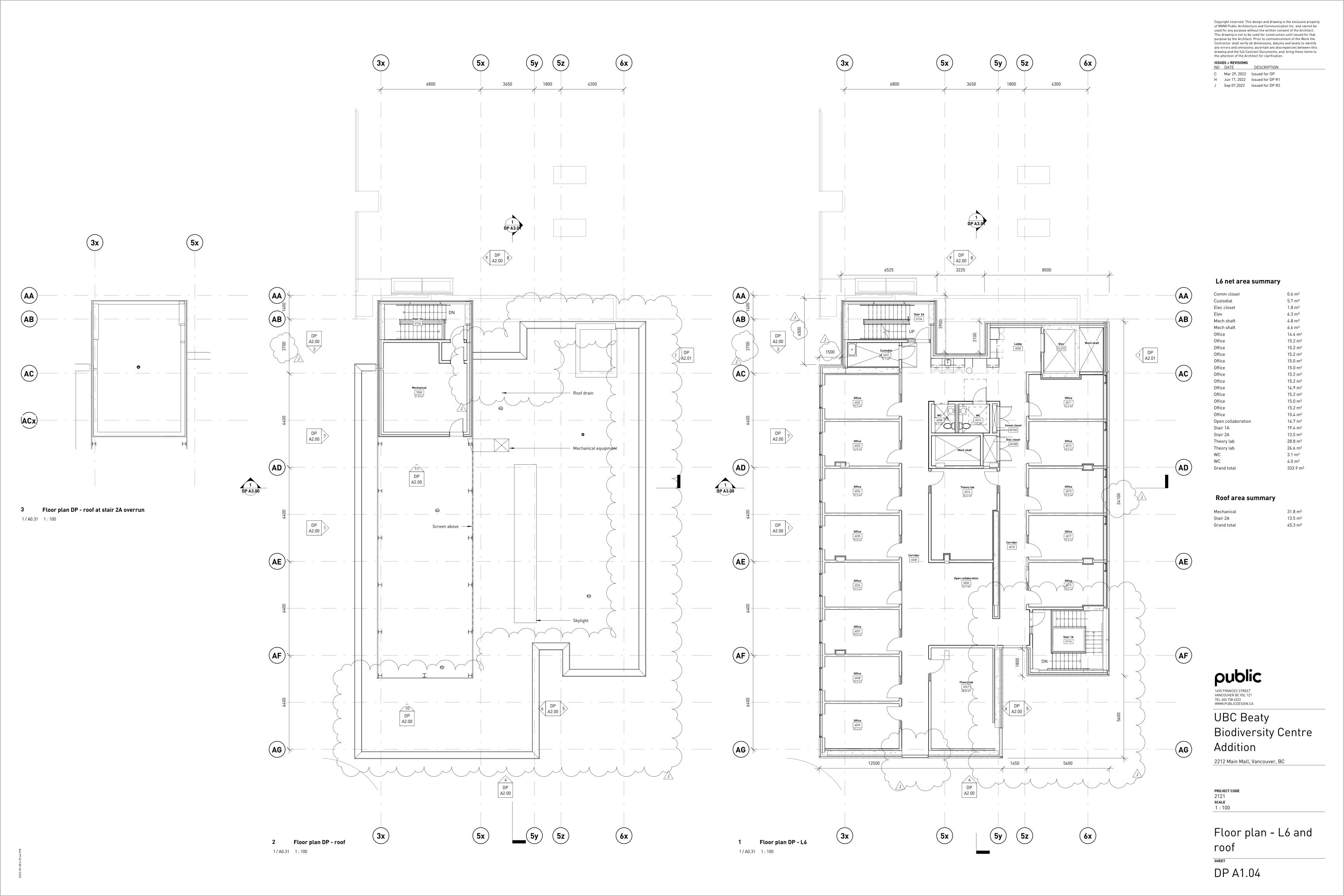
0.6 m² 5.7 m² 54.8 m² 1.8 m² 6.3 m² 16.7 m² 4.8 m² 5.8 m² 49.8 m² 11.7 m² 14.1 m² 15.0 m² 15.2 m² 15.2 m² 50.3 m² 19.3 m² 13.5 m² 30.5 m² 25.7 m² 3.1 m² 3.6 m² 363.4 m²

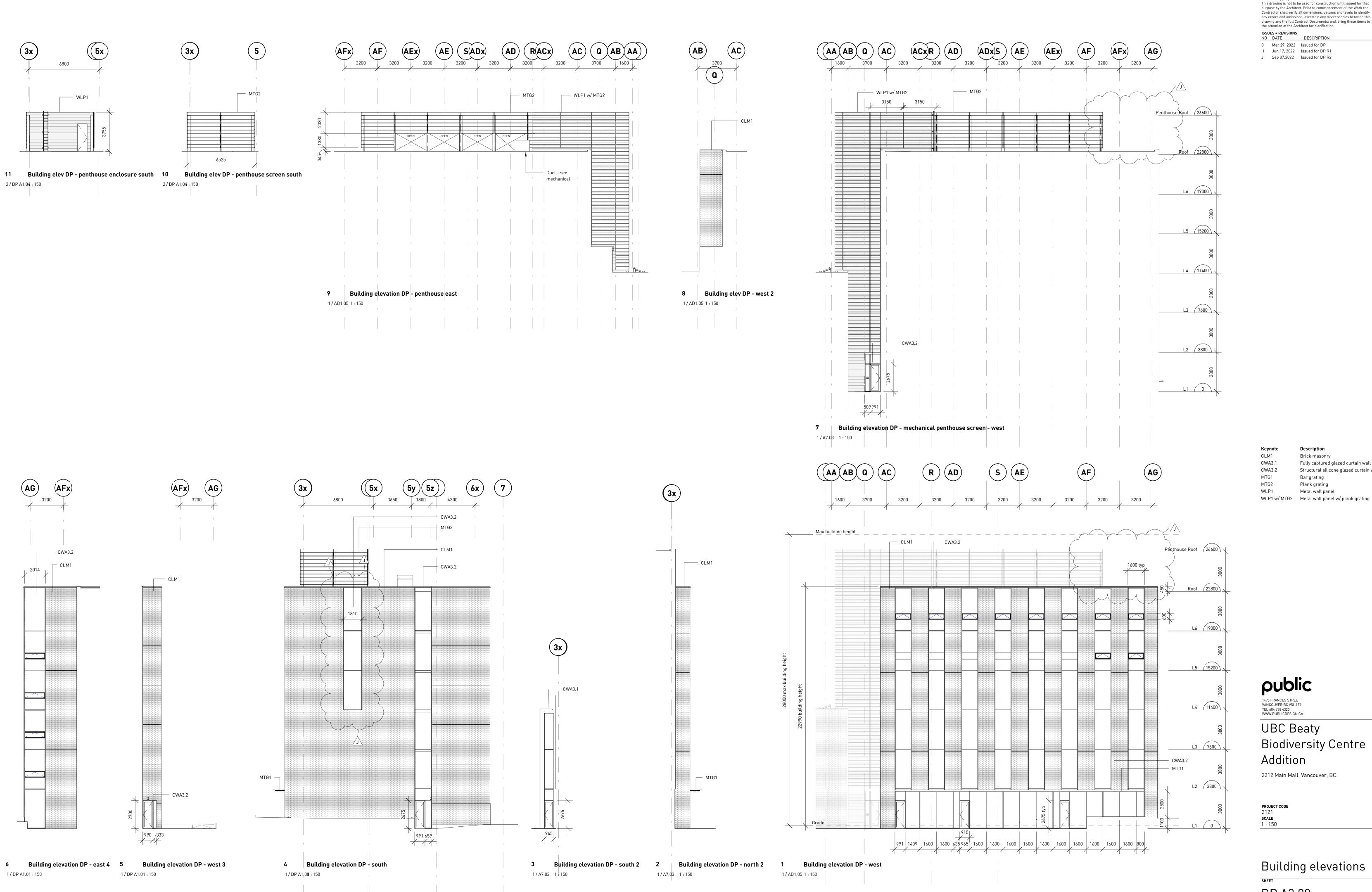
UBC Beaty Biodiversity Centre

2212 Main Mall, Vancouver, BC

Floor plan - L4 and

DP A1.03





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UBC Beaty **Biodiversity Centre** Addition

Description

Bar grating Plank grating

Metal wall panel

Brick masonry

Fully captured glazed curtain wall Structural silicone glazed curtain wall

2212 Main Mall, Vancouver, BC

Building elevations

DP A2.00

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CLM1 Brick masonry
CWA3.1 Fully captured glazed curtain wall
CWA3.2 Structural silicone glazed curtain wall
WLP1 Metal wall panel

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UBC Beaty Biodiversity Centre Addition

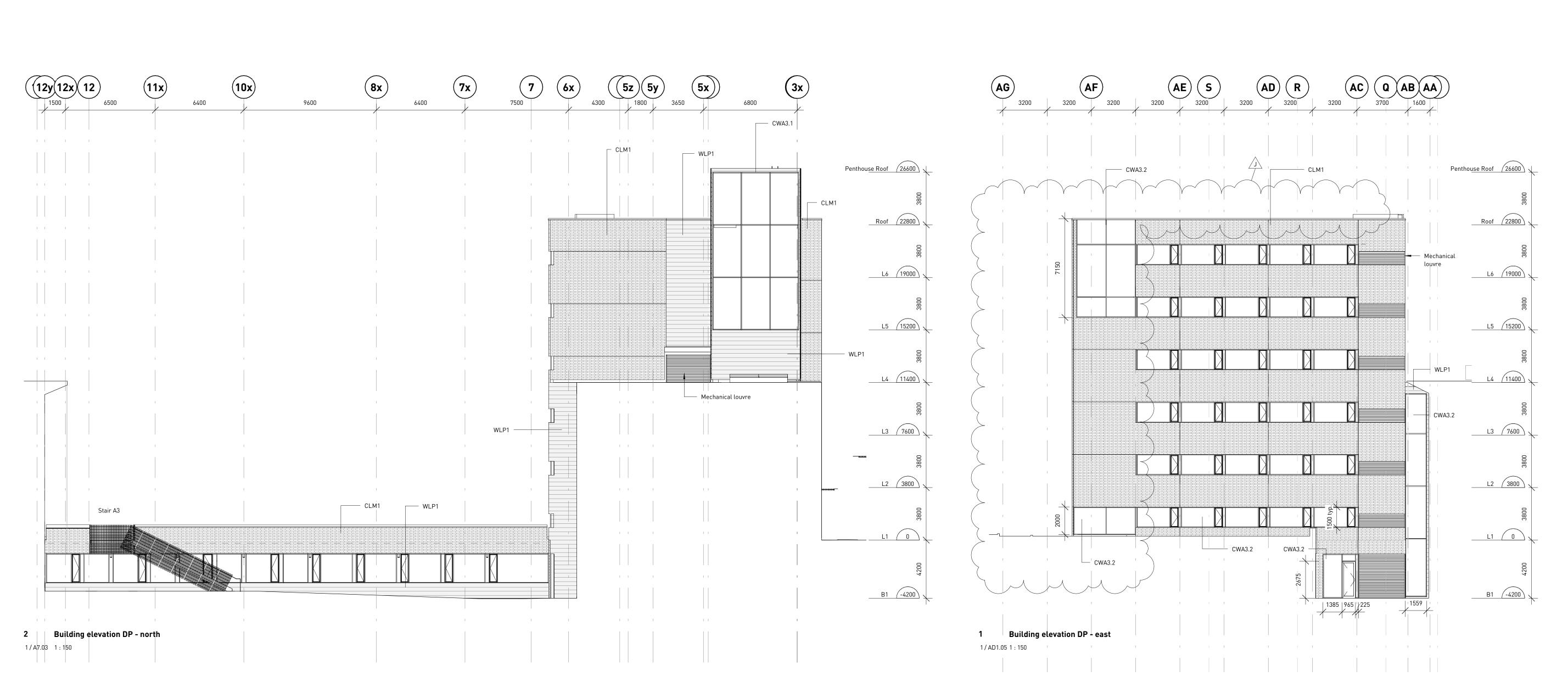
2212 Main Mall, Vancouver, BC

PROJECT CODE
2121
SCALE
1:150

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Building elevations

DP A2.01



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UBC Beaty **Biodiversity Centre** Addition

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PROJECT CODE 2121 SCALE 1:100

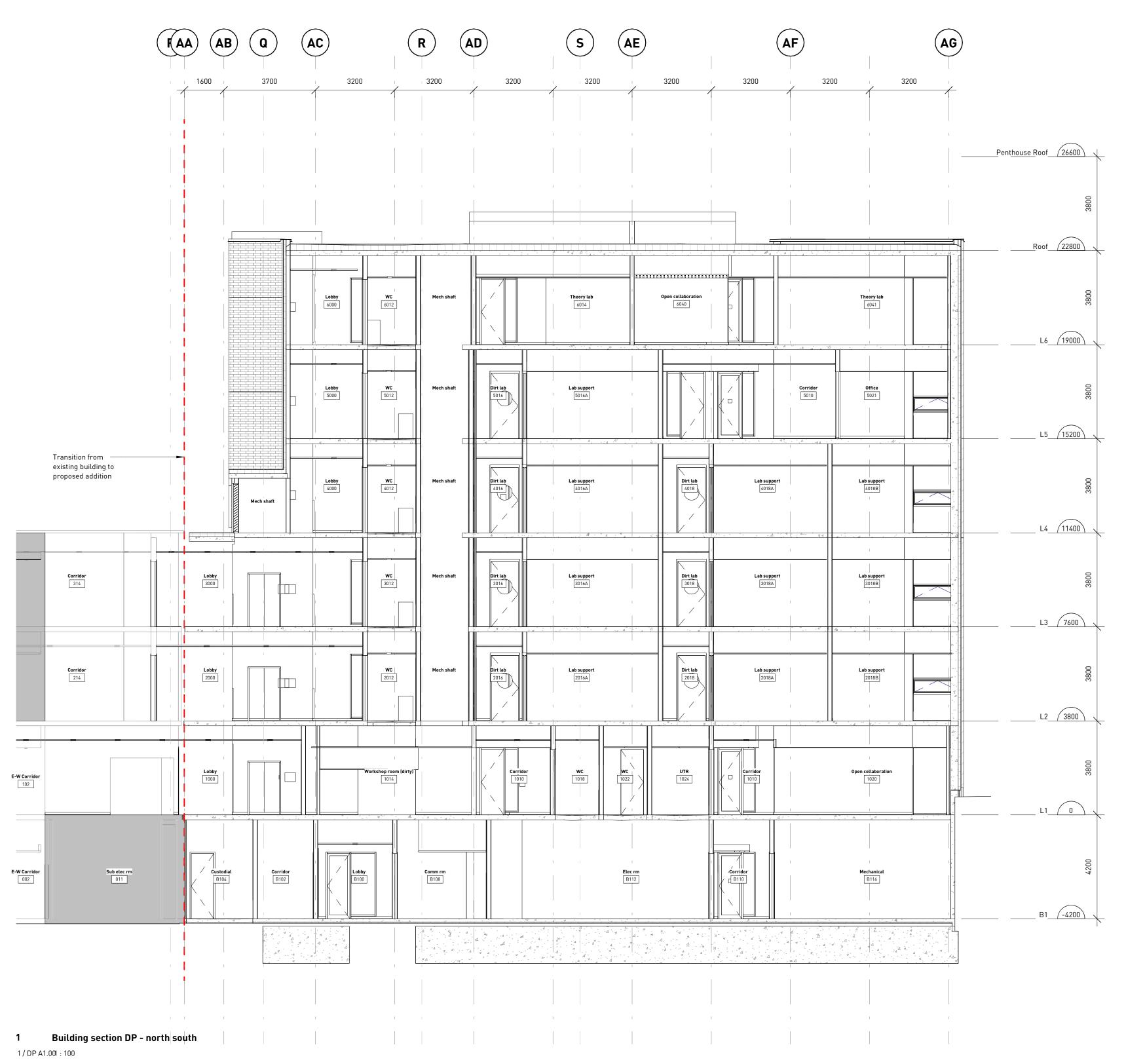
Building sections

DP A3.00

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1:100

Building sections

DP A3.01