



SUBJECT	UBC Five-Year Capital Plan 2026-2027 to 2030-2031
SUBMITTED TO	Property Committee
MEETING DATE	June 2, 2025
SESSION CLASSIFICATION	Recommended session criteria from Board Meetings Policy: OPEN
REQUEST	APPROVAL REQUESTED IT IS HEREBY RESOLVED that the Property Committee recommends that the Board of Governors approve as circulated the UBC Five-Year Capital Plan (2026-2027 to 2030-2031) for submission to the Ministry of Infrastructure Post-Secondary and Cross Government Capital Branch.
LEAD EXECUTIVE	Frank Laezza, Vice-President Finance & Operations
SUPPORTED BY	Gage Averill, Provost and Vice-President Academic, UBC Vancouver Lesley Cormack, Deputy Vice-Chancellor and Principal, UBC Okanagan Rehan Sadiq, Provost and Vice-President Academic, UBC Okanagan Ainsley Carry, Vice-President Students Bhushan Gopaluni, Vice-Provost and Associate Vice-President Faculty Planning John Metras, Associate Vice-President Facilities Rob Einarson, Associate Vice-President Finance & Operations, UBC Okanagan Michael White, Associate Vice-President Campus & Community Planning Andrew Parr, Associate Vice-President Student Housing & Community Services Jennifer Burns, Associate Vice-President Information Technology Denise Brown, Director, Capital Planning & Development Yale Loh, Treasurer

PRIOR SUBMISSIONS

The subject matter of this submission is considered annually by the Board of Governors, most recently on [June 11, 2024](#) (OPEN SESSION) – UBC Five Year Capital Plan – 2025-2026 to 2029-2030.

The following Executive Summary provides a status update from the date of the most recent submission.

EXECUTIVE SUMMARY

Each year, the Ministry of Infrastructure’s Post-Secondary and Cross-Government Capital Branch (MOI) requests that all public post-secondary institutions, including UBC, submit a Five-Year Capital Plan by June. This plan provides the MOI with a high-level view of UBC’s capital requirements for potential government funding consideration. The plan includes projects in five categories:

- New Priority (Building) Investments
- Student Housing
- Routine Capital
- Carbon Neutral Capital Program
- Information Management/Information Technology

Approval of the Five-Year Capital Plan by the Board of Governors is required for submission. However, this approval does not obligate UBC to undertake any specific project or allocate any university resources. Any project that receives government support would still be subject to UBC’s standard capital approval process.

The Board is now asked to review the proposed Five-Year Capital Plan, ensure it aligns with the University's long-term priorities and current goals, and approve its submission to the MOI.

Five-Year Capital Plan

UBC has developed a jointly funded Capital Plan that addresses key priorities: core academic facility needs, student housing, information technology (IT), and campus operations, sustainability and resilience. This plan aligns with Provincial priorities and capital categories, and is in accordance with the University's established Capital Planning Principles. The proposed projects were selected by the UBC Executive based on their potential to contribute to the University's strategic and operational priorities. These projects are prioritized from a longer list of capital projects identified through on-going consultation with Faculties and Departments.

The full list of projects was evaluated and prioritized using an updated assessment model developed with an external consultant commissioned by the VP Finance & Operations (VPFO). The assessment model sets out to consider how each project contributes to the University's strategic and operation priorities. The prioritization criteria are as follows:

1) University Strategic Priorities (50%)

- People & Places – 10%
- Research Excellence – 15%
- Transformative Learning – 15%
- Local & Global Engagement – 10%

2) Operational Priorities (50%)

- Fiscal Sustainability – 25%
- Risk Management – 25%

Final selection of recommended projects for the Five-Year Capital Plan included consideration of additional factors such as alignment with government priorities, funding potential, inter-campus equity, and status of project development.

Input on the capital planning process and priorities was gathered from a variety of internal groups. The following groups were invited to contribute to the process and project scoring:

- UBCV Committee of Deans
- UBCV Property & Planning Advisory Committee
- Vancouver Subcommittee of the Council of Senates Budget Committee
- UBCO Senate Academic Building & Resources Committee
- Alma Mater Society / UBC Students' Union Okanagan
- Graduate Student Society
- UBCV Facilities Leadership
- UBCO Strategic Space Planning Committee (information has been shared by the UBCO Associate Vice-President Finance & Operations and UBCO Director, Infrastructure Development with the Okanagan Leadership Council and UBCO Finance & Operations Leadership)
- Indigenous Partners – Musqueam (UBCO has engaged in recent and extensive consultation with Okanagan Nation Alliance regarding proposed capital projects)

The proposed UBC Five-Year Capital Plan includes prioritizes academic, student housing, IT and campus operations, sustainability & resilience projects, totalling \$2.10 billion. The list includes a funding request of \$1.59 billion to the Provincial Government. Associated demolitions and renovations will reduce UBC’s deferred maintenance by \$203 million and improve seismic ratings on specific buildings. In addition, the progressive construction standards that UBC embodies will reduce greenhouse gas (GHG) emissions as well as energy and water use on UBC campuses. The approved Five-Year Capital Plan will be submitted to the Province of British Columbia Ministry of Infrastructure’s Post-Secondary and Cross Government Capital Branch by the July 4, 2025.

UBC Five-Year Capital Plan: Priority Projects

The UBC Five-Year Capital Plan is a short-list of strategic academic facilities, student housing, IT and campus operations projects that support UBC’s priorities and focus on transformative learning and research excellence on both the Point Grey and Kelowna campuses. The shortlist of projects is intended to align with Provincial government priorities such as undergraduate teaching, facility asset renewal, technology, health, student housing, and greenhouse gas reduction. It serves noting that due to a constrained fiscal context, the recent trade measures taken by the United States, and counter measures by the Canadian federal government, the provincial government is reevaluating its priorities. Moreover, as both federal and provincial governments work to recalibrate economic strategies, new priority areas and initiatives aimed at spurring economic growth may emerge. The shortlisted projects are shown in the context of UBC’s current list of Facilities Priorities (Academic, Student Experience, Campus Operations, Sustainability & Resilience).

As careful prioritization of proposed capital projects is critical to ensure that limited capital is directed to help UBC achieve its academic goals, these projects have been ranked to align with UBC’s strategic and operational objectives. The top two UBCV academic projects – Chemistry Laboratory Complex’s Science Central One and Two – highlight the critical need for improved and expanded space to support foundational undergraduate teaching, and address deteriorating and vulnerable facilities. The Science Central One and Two projects are central to almost every undergraduate program at UBC, including those in fundamental and health sciences, engineering and arts. As such, it is key to advancing UBC’s and the province’s ambitious goals in the areas of health, climate action and sustainability. It is also an important project for mitigating the campus seismic risk.

The top student housing project – UBCO Student Housing Expansion – Phase 1 – highlights the need to address the increasing demand for on-campus housing and is in support of the Province’s response to the provincial housing crisis.

The top UBCO project – the UBC Okanagan FIRE (Fire Innovation, Research and Education) Facility – will provide critical high head and testing space for wildfire research.

The proposed shortlisted projects are shown in **Table 1: Proposed UBC Five Year Capital Plan** and are described in more detail in **Supplemental Materials 2: UBC Five Year Capital Plan: Project Descriptions**.

Table 1: Proposed UBC Five Year Capital Plan

UBC Campus	Project	Delivery ¹	Cost in \$millions ²	Proposed Funding in \$ millions	Request to MOI in \$ millions ³	Reduced Deferred Maintenance in \$ millions
Vancouver	Science Central One - Chemistry Laboratory Complex (Teaching)	2031	\$242	Government \$182 UBC \$ 60	\$182	\$82.8
Vancouver	Science Central Two - Chemistry Laboratory Complex (Research)	2034	\$292	Government \$219 UBC \$ 73	\$219	\$33.8

UBC Campus	Project	Delivery ¹	Cost in \$millions ²	Proposed Funding in \$ millions	Request to MOI in \$ millions ³	Reduced Deferred Maintenance in \$ millions
Vancouver	Applied One – Interdisciplinary Core	2032	\$144	Government \$108 UBC \$ 36	\$108	N/A
Okanagan	UBC Okanagan FIRE (Fire Innovation, Research and Education) Facility	2030	\$32	Government \$ 32	\$32	N/A
N/A ⁴	Medicine - MPT-MOT Expansion – Kelowna	2028	\$35	Government \$ 35	\$35	N/A
Vancouver	Mathematics Building	2031	\$198	Government \$149 UBC \$ 49	\$149	\$57.4
Okanagan & Vancouver	UBC Campus Network Refresh / Modernization	2027	\$3	Government \$ 3	\$3	N/A
Okanagan	UBCO Student Housing Expansion	2030	\$104	Government \$ 67 (loan + grant) UBC \$ 37	\$67	N/A
Vancouver	Campus Energy Centre – Electric Boiler & Thermal Storage	2031	\$42	Government \$ 32 UBC \$ 10	\$32	N/A
Vancouver	Medicine One (MED-1) ⁵	2033	\$728	Government \$546 UBC \$182	\$546	N/A
Vancouver	Applied One – Academic Units	TBD	\$282	Government \$212 UBC \$ 70	\$212	\$28.7
	Total		\$2,102		\$1,585	\$203

1 – Target completion dates assume project funding approval by March 31, 2026.

2 – Project capital costs reflect latest estimates as of January 2025. All estimates are Class D with accuracy of +/- 30%.

3 – Proposed contributions from Ministry of Infrastructure’s Post-Secondary and Cross Government Capital Branch (MOI) are notional.

4 – The proposed project is a Faculty of Medicine project in the Interior Health region. The project location may be near Kelowna General Hospital or on the UBCO campus.

5 – Project scale and costing is under review.

PRESENTATIONS

1. UBC Five Year Capital Plan 2026-27 to 2030-31

SUPPLEMENTAL MATERIALS (optional reading for Governors)

1. UBC Capital Priorities
2. Project Descriptions

UBC Five-Year Capital Plan 2026/27 – 2030/31

June 3, 2024

John Metras, AVP, UBC Facilities



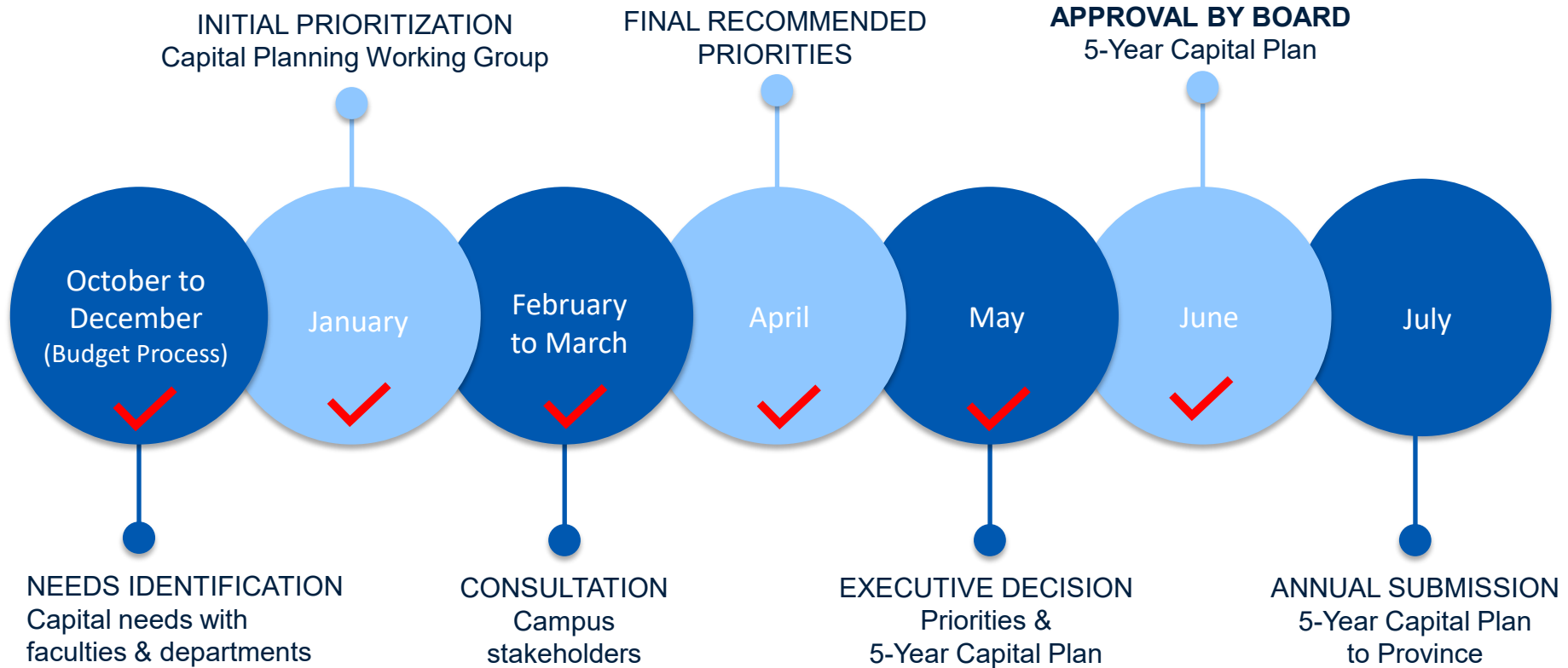
Capital Planning Summary



Comprehensive annual **Capital Planning & Prioritization** process:

- In accordance with UBC Capital Planning Principles
- In support of UBC Strategic Plan
- In alignment with Provincial government priorities
- Provides up-to-date assessment of UBC major capital needs for internal planning and potential funding allocation
- Primary output is Five-Year Capital Plan for submission to the Ministry of Infrastructure (MOI)
- Opportunity to highlight UBC's top capital priorities to the Provincial government for potential funding

Annual Process to Develop Capital Plan



2025 Five-Year Capital Planning Process



- Capital Planning & Development (CP+D) and Facilities Planning met with UBC faculties, departments and ancillary groups to identify academic, student experience and operational priorities that may lead to a major capital project.
- Project scoring was undertaken by the **Capital Planning Working Group** which is composed of academic and operational leaders.
- In 2025, CP+D introduced the new draft Capital Allocation Framework (developed with Deloitte; commissioned by the VPFO) to the help assess and prioritize proposed projects.
- This step was followed by input gathering from UBC stakeholders and Indigenous hosts.

Prioritization Criteria for Major Capital Projects

Evaluation criteria & weighting

1. Strategic Priorities (50%)

- 10% People & Places
- 15% Research Excellence
- 15% Transformative Learning
- 10% Local & Global Engagement

2. Operational Priorities (50%)

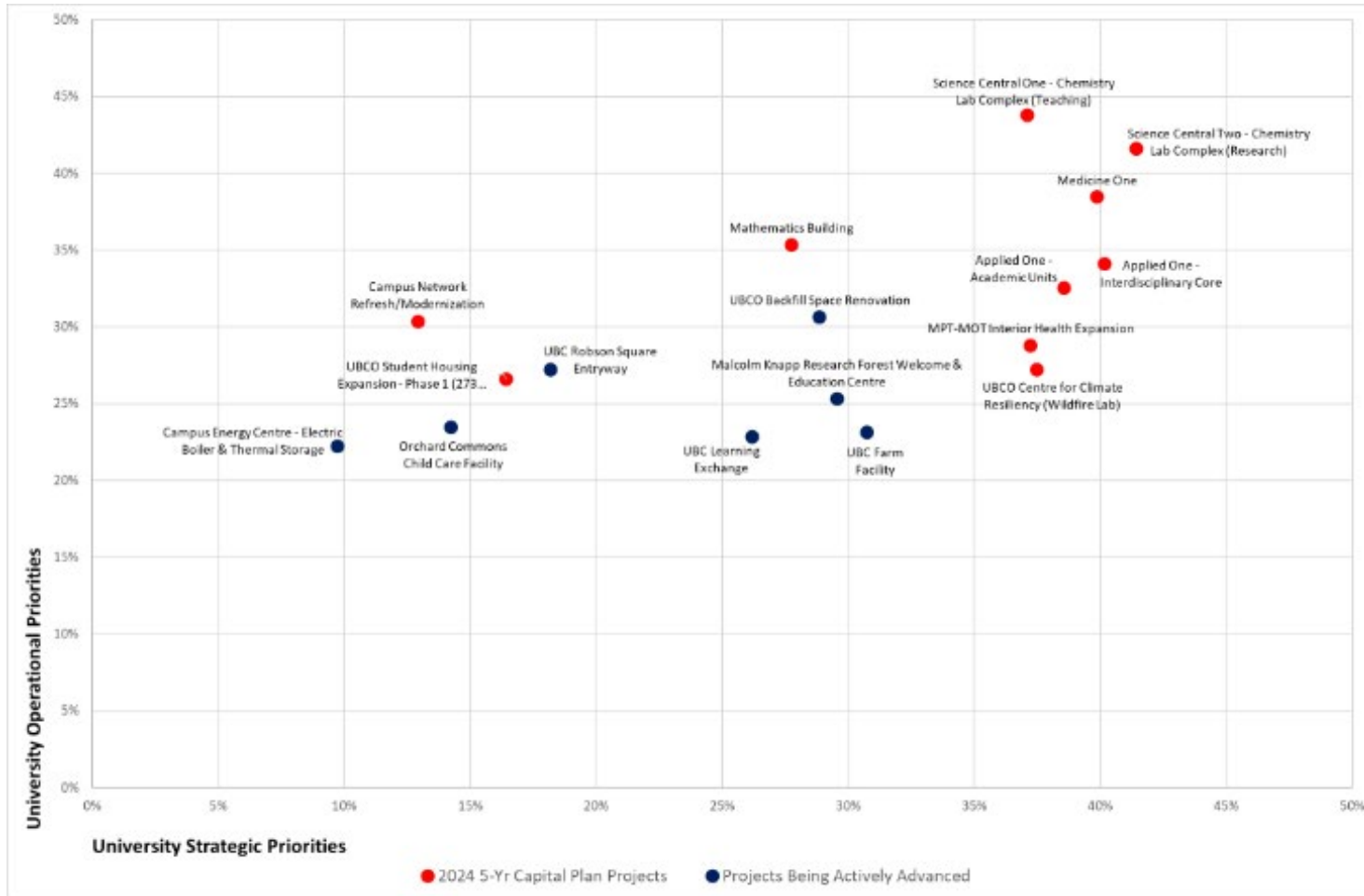
- 25% Fiscal Sustainability
- 25% Risk Management



2025 minimum evaluation requirements:

1. Estimated capital cost over \$5 million
 2. Minimum Executive 2 approval
- Project evaluation is based on the Capital Allocation Framework / Scorecard developed with Deloitte
 - 2025 scorecard is a qualitative assessment due to availability of information
 - Capital Allocation Framework is still in draft; feedback will be incorporated by UBC Treasury/Deloitte

Capital Prioritization Scoring Results



Capital Plan Consultation



Input on capital priorities & planning process from:

- UBCV Committee of Deans
- UBCV Property & Planning Advisory Committee
- Vancouver Subcommittee of the Council of Senates Budget Committee
- UBCO Senate Academic Building & Resources Committee
- Alma Mater Society / UBC Students' Union Okanagan
- Graduate Student Society
- UBCV Facilities Leadership
- UBCO Strategic Space Planning Committee (information also shared with the Okanagan Leadership Council and UBCO Finance & Operations Leadership)
- Indigenous Partners – Musqueam (UBCO has engaged in recent and extensive consultation with Okanagan Nation Alliance regarding proposed capital projects)

Executive review of Five-Year Capital Plan



- Assessed projects and adjusted priority order as required to account for factors not covered by prioritization scoring model, including:
 - Alignment with government priorities and potential for funding
 - Project readiness (e.g. stage of development, internal funding availability)
 - Inter-campus equity and unique needs of each campus
- Approved final recommended Five-Year Capital Plan for presentation to Board

Recommended 2025 Five-Year Capital Plan



UBC Campus	Project	Delivery ¹	Cost in \$Ms ²	Request to Province in \$Ms ³
Vancouver	Science Central One (Chemistry Teaching Labs)	2031	\$242	\$182
Vancouver	Science Central Two (Chemistry Research Labs)	2034	\$292	\$219
Vancouver	Applied One – Interdisciplinary Core	2032	\$144	\$108
Okanagan	UBC Okanagan FIRE (Fire Innovation, Research and Education) Facility	2030	\$32	\$32
N/A ⁴	Medicine - MPT-MOT Expansion – Kelowna	2028	\$35	\$35
Vancouver	Mathematics Building	2031	\$198	\$149
Vancouver & Okanagan	UBC Campus Network Refresh / Modernization	2027	\$3	\$3
Okanagan	UBCO Student Housing Expansion – Phase 1	2030	\$104	\$67
Vancouver	Campus Energy Centre – Electric Boiler & Thermal Storage	2031	\$42	\$32
Vancouver	Medicine One (MED-1) ⁵	2033	\$728	\$546
Vancouver	Applied One – Academic Units	TBD	\$282	\$212
	Total		\$2,102	\$1,585

1 – Target completion dates assume project funding approval by March 31, 2026.

2 – Project capital costs reflect latest estimates as of January 2025. All estimates are Class D with accuracy of +/- 30%.

3 – Proposed contributions from Ministry of Infrastructure's Post-Secondary and Cross Government Capital Branch (MOI) are notional.

4 – The proposed project is a Faculty of Medicine project in the Interior Health region. The project location may be near Kelowna General Hospital or on the UBCO campus.

5 – Project scale and costing is under review.

Discussion and decision points



Approval of the UBC Five-Year Capital Plan (2026/27 to 2030/31) for submission to the Ministry of Infrastructure (MoI) Post-Secondary and Cross Government Capital Branch.

Supplemental Materials 1: UBC Capital Priorities

UBC Category	Project Name	Faculty / Department	Cost (\$000s)
Academic	Science Central One - Chemistry Lab Complex (Teaching)	Science	\$242,100
Academic	Science Central Two - Chemistry Lab Complex (Research)	Science	\$292,300
Academic	Applied One - Interdisciplinary Core	Applied Science	\$144,000
Academic	UBC Okanagan FIRE (Fire Innovation, Research and Education) Facility	UBCO Science	\$32,100
Academic	MPT-MOT Interior Health Expansion - Kelowna	Medicine	\$35,300
Academic	Mathematics Building	Science	\$198,000
IT	Campus Network Refresh/Modernization	Multi-campus	\$3,000
Student Experience	UBCO Student Housing Expansion - Phase 1 (273 beds)	UBCO / SHCS	\$103,700
Campus Operations, Sustainability & Resilience	Campus Energy Centre - Electric Boiler & Thermal Storage	UBCV EWS	\$41,700
Academic	Medicine One	Medicine	\$727,600
Academic	Applied One - Academic Units	Applied Science	\$282,000
Academic	UBCO Backfill Space Renovation	UBCO	\$35,000
Academic	Malcolm Knapp Research Forest Welcome & Education Centre	Forestry	\$17,500
Student Experience	Orchard Commons Child Care Facility	SHCS	\$6,200
Academic	UBC Learning Exchange	UBC Learning Exchange	\$18,800
Academic	UBC Robson Square Entryway	UBC Robson Square	\$5,700
Academic	UBC Farm Facility	LFS	\$6,900
Academic	Anthropology & Sociology Complex	Arts	\$80,700
Academic	Advanced Therapeutics Manufacturing Facility (Gateway North)	Medicine	\$36,000
	Total		\$2,308,600

Capital projects are potentially funded through government contributions, donors, Faculty or Department operating budgets, Academic Capital Fund (Central operating budget), Infrastructure Impact Charges (IICs), and/or internal revenue generation (e.g., student housing rents). **Projects highlighted in red are proposed for the UBC Five-Year Capital Plan** submitted annually to the Ministry of Infrastructure (previously submitted to the Ministry of Post-Secondary Education and Future Skills) for potential government funding.

Supplemental Materials 2: Project Descriptions

Note that some minor edits may be made to these project descriptions prior to final submission to MOI.

SCIENCE CENTRAL ONE (TEACHING)

Area: 16,005 GSM (172,256 GSF)

Phase One Estimate: \$242 million

Faculty/Department: Science - Chemistry

Description/Rationale: UBC proposes to build expanded replacement facilities to replace three failing Chemistry buildings that house undergraduate teaching and research. Despite best efforts to maintain functionality, the Chemistry buildings are deteriorating, energy-intensive, and highly vulnerable in a seismic event. Phase One will build Science Central One, an undergraduate teaching building on the Wesbrook site, which will allow subsequent demolition of Chemistry B and C Buildings. Phase Two will build Science Central Two, a new interdisciplinary building for research in sustainable chemistry on the Chemistry B site, allowing for the subsequent demolition of the Chemistry A (Chemistry Physics) Building (demolition of Chem A is not included in the preliminary budget).

Replacement of these deteriorated and seismically vulnerable buildings is critical. Not proceeding with this project poses a risk to UBC's ability to deliver undergraduate Chemistry teaching.

Phase One – Science Central One (Teaching):

As STEM education becomes more interdisciplinary, undergraduate programs within the Faculty of Science and beyond have increased requirements for foundational chemistry skills. Core chemistry courses are mandatory for every UBC Science and Engineering student's education (including Biomedical Engineering). In addition, both core and advanced courses are essential to prepare students for Medicine and other health-related professional programs, and for interdisciplinary work with Biomedical Engineering and Pharmaceutical Sciences.

At its core, chemistry is an experimental science. Only through lab experiences can students connect the importance of experimentation to scientific discovery and learn valuable practical training. Employers need graduates who have the opportunity to conduct practical research and develop skills to solve problems, and who have been trained in sophisticated, state-of-the-art techniques that relate to analytical chemistry, nanomaterials, new drug discovery, and industrial catalysis. The demand for chemistry courses has risen dramatically over the last ten years. The Department of Chemistry currently teaches over 4000 students per year, approximately 40% of whom are in other faculties, but program growth and innovative curriculum development have been severely limited by the size, layout, age, condition, and inadequate infrastructure of the existing 1960s era Chemistry B and C teaching laboratory facilities. Faculty have been exemplary in adapting lab experiences to suit existing conditions, but many lab experiments have been removed from the curriculum, and others have been designed to minimize use of chemicals due to the poor ventilation and inability to use many of the existing fume hoods. The facilities will no longer fully support the program growth and innovation required to support BC's growth industries. The current deteriorating buildings have reached the end of their service life, and restrict innovative pedagogical development, growth in student numbers and programs such as Biomedical Engineering, and UBC priorities such as inclusion and collaboration.

The proposed new building will provide safe, modern labs to support modern pedagogy, and will enhance opportunities for teaching and research collaboration, and for enriched, team-based learning experiences through chemistry computational and robotics space, an undergraduate Capstone research maker space for interdisciplinary projects with a chemistry component, chemistry maker space, and a state-of-the-art shared instrument facility. Spaces that integrate teaching and research and provide enhanced training opportunities will ensure that the trainees produced by UBC Chemistry will be able to support and enhance BC's economy. The building will include replacement of the existing, large, general use lecture theatres in Chemistry B, C and Wesbrook which currently place large student populations at risk in a seismic event, and Faculty of Science Co-op and Advising offices.

Type/Location: UBC Vancouver.

The proposed location for Science Central One is the site of the current Wesbrook Building, which is end of life, seismically vulnerable, and slated for demolition. The Wesbrook site is at the corner of University Blvd and East Mall, in close proximity to the existing Chemistry complex. The proposed site received approval from the New Building Site Selection Committee Nov. 16, 2020.

Facility Condition Index/Risks:

Chemistry B and C also use significantly more energy than new baseline buildings, and replacing these buildings will have a measurable impact on achieving UBC’s Climate Action Plan goals. Replacement of the buildings is also critical for mitigation of serious seismic risk and deferred maintenance:

Science Central One - Chemistry B/South and Chemistry C/East are rated seismic risk Tier V and Tier III respectively. Wesbrook Building, which will be demolished to accommodate the new Teaching Building, is rated Tier IV. Replacement of these three buildings will result in the mitigation of \$82.8 million in deferred maintenance and will greatly improve life safety on campus.

Associated Deferred Maintenance (DM)	DM in \$ millions	FCI	Built	Seismic Tier
Phase 1				
Chemistry B Chemistry South(Bldg 148)	23.6	0.65	1959	V
Chemistry C Chemistry East (Bldg 144)	14.6	0.69	1963	III
Chemistry Storage	0.2	0.56	1956	IV
Wesbrook (Bldg 864)	40.8	0.74	1949	V
Wesbrook Annex (Bldg 867)	3.6	0.59	1983	II
Total	\$ 82.8			

Program: Resource Planning Group (RPG) has developed an updated Master Programs for the project (updated Spring 2024).

Science Central One – Program includes large lecture theatres, undergraduate teaching laboratories, lab support and instructors’ offices, undergraduate resource centre, interdisciplinary undergraduate capstone research space, Faculty of Science Co-op and Science Advising.

Funding: The 2024 UBC 5-Year Capital Plan included Science Central One as the top priority project. \$170 million (75% of projected costs) was requested from the BC Ministry of Infrastructure’s Post-Secondary and Cross Government Capital Branch (MOI) for Science Central One. The Faculty of Science will work with the central administration to identify funding sources for the balance of the budget, which may include donors, Faculty resources, and central support of debt servicing.

Current Approval Level: Executive 1 approval for the full concept was received on November 27, 2018, and Executive 2 approval for Phase One was received December 1, 2020. The project was listed as the number one priority on the UBC Five-Year Capital Plan submitted to MOI in both 2022, 2023 and 2024 and is the top priority for the Faculty of Science.

SCIENCE CENTRAL TWO (RESEARCH)

Area: 15,040 GSM (161,889 GSF)

Phase Two Estimate: \$292 million

Faculty/Department: Science - Chemistry

Description/Rationale: UBC proposes to build expanded replacement facilities to replace three failing Chemistry buildings that house undergraduate teaching and research. Despite best efforts to maintain functionality, the Chemistry buildings are deteriorating, energy-intensive, and highly vulnerable in a seismic event. Phase One will build Science Central One, an undergraduate teaching building on the Wesbrook site, which will allow subsequent demolition of Chemistry B and C Buildings. Phase Two will build Science Central Two, a new interdisciplinary building for research in sustainable chemistry on the Chemistry B site, allowing for the subsequent demolition of the Chemistry A (Chemistry Physics) Building (demolition of Chem A is not included in the preliminary budget).

Replacement of these deteriorated and seismically vulnerable buildings is critical. Not proceeding with this project poses a risk to UBC’s ability to deliver undergraduate Chemistry teaching.

Phase Two – Science Central Two (Research):

Research focused on global challenges such as climate change mitigation, alternative energy and sustainability are core to the UBC Chemistry’s mission. The existing Chemistry research space is insufficient to grow this research, and the Chemistry A Building’s failing infrastructure and poor configuration cannot support basic research needs, let alone the collaborative, inter-disciplinary and inter-generational imperatives for advancing innovation. Innovative, updated and expanded research space is critical to supporting Chemistry’s growth and vision, and to attracting and retaining the creative minds that will uphold UBC’s leadership in this critically important area of research.

The research activities planned for the Chemistry A replacement building focus on key problems affecting BC and the globe. The new research space will be dedicated to four core research themes: Climate/environmental science; Sustainable and green chemistry; Materials for clean energy; and Chemistry for health and biotechnology. UBC Chemistry already has significant expertise in these areas, including world-class researchers. The replacement of existing facilities with state-of-the-art laboratories will facilitate more integration between the teaching and training programs, support greater interdisciplinary research collaboration and help create more partnerships with industry. Collectively, these will be a catalyst for developing innovative solutions to global issues and to preparing graduates to provide meaningful contributions to BC’s economic growth.

Type/Location: UBC Vancouver.

Demolition of Chemistry B and C Buildings will follow relocation of teaching functions to the new building. Science Central Two will build a new research building on the Chemistry B site at University Blvd and Main Mall, which will consolidate Chemistry research along Main Mall and allow for the demolition of Chemistry A Building. This very prominent site at the corner of University Blvd and East Mall will then be available for redevelopment.

Facility Condition Index/Risks:

Chemistry A, B and C also use significantly more energy than new baseline buildings and replacing these buildings will have a measurable impact on achieving UBC’s Climate Action Plan goals. Replacement of the buildings is also critical for mitigation of serious seismic risk and deferred maintenance:

Science Central Two – Chemistry A (built in 1989, FCI 0.67) is rated seismic risk Tier V. Replacement will result in the mitigation of \$33.8 million in deferred maintenance and will greatly improve life safety.

Associated Deferred Maintenance (DM)	DM in \$ millions	FCI	Built	Seismic Tier
Phase 2				
Chemistry A Chemistry Physics (Bldg 447)	33.8	0.67	1989	IV
Total	\$ 33.8			

Program: Resource Planning Group (RPG) has developed an updated Master Programs for the project (updated Spring 2024).

Science Central Two – Program includes research laboratories and lab support, faculty offices, collaboration spaces, and core facilities including the Biological Services Lab, NMR facility, and Chemistry Stores. This program may be expanded to include space for interdisciplinary collaboration with industry to more quickly advance solutions to global issues.

Funding: The 2024 UBC 5-Year Capital Plan included Science Central Two as the second priority project. \$205 million (75% of projected costs) was requested from the BC Ministry of Infrastructure’s Post-Secondary and Cross Government Capital Branch (MOI) for Science Central Two. The Faculty of Science will work with the central administration to identify funding sources for the balance of the budget, which may include donors, Faculty resources, and central support of debt servicing.

Current Approval Level: Executive 1 approval for the full concept (Science Central One and Two) was received on November 27, 2018. The project was listed as the number one (when combined with Science Central One) or two priority (when separated from Science Central One) on the UBC Five-Year Capital Plan submitted to MOI in both 2022, 2023 and 2024 and is the top priority for the Faculty of Science.

APPLIED ONE - INTERDISCIPLINARY CORE

Area: 10,508 GSM (113,109 GSF)

Estimate: \$144 million

Faculty/Department: Applied Science

Description/Rationale: The proposed Applied One facility, comprised of two phases, will be an innovative environment for leading-edge approaches to learning, research, knowledge transfer and community engagement that is critical to supporting the Faculty of Applied Science strategic plan. Applied One will realize the Faculty’s aspirations to transform the way academic units work together to address global grand challenges that require complex solutions, such as climate change, urbanization, and reconciliation with historic systems of injustice. The new facility is also required to support the planned growth in the undergraduate and graduate student populations required to address the significant demands for engineering and design education and increased opportunities in the labour market. The Faculty’s multiple aging and deteriorating buildings cannot support this growth, or the innovative pedagogy envisioned.

Foundational to the concept of the Applied One building is the Faculty of Applied Science’s commitment to creating a positive impact through research and teaching that ripples out across multiple scales – from academic units, to UBC, and out to the world. Applied One will deliver on the need for spaces that support diffusive interdisciplinary research, experiential learning, and creative partnerships, and will be designed in a way that compels new learning in spaces that foster creative exploration, intercultural competence and technical innovation. Anticipated project outcomes also include the following:

- Applied One will consolidate shared resources and expertise from the entire Faculty, as well as provide new homes for the School of Architecture and Landscape Architecture (SALA), School of Community and Regional Planning (SCARP), the Norman B. Keevil Institute of Mining Engineering, and Department of Materials Engineering.
- Through providing new space to work in new ways, Applied One is intended as a catalyst for the growth of the Faculty of Applied Science.
- Beyond UBC, Applied One aims to provide dedicated spaces to connect with public and private industry programs in order to forge links between the Faculty and the world.

Phase One: Applied One - Interdisciplinary Core

Type/Location: The proposed site for the Applied One Interdisciplinary Core is on Main Mall directly across from the Fred Kaiser Building, and encompasses the current footprint of the Barn and surrounding lands. The proposed site received New Building Site Selection Committee approval on November 8, 2021.

Facility Condition Index/Risks: The Applied One Interdisciplinary Core building will be a net addition to the Faculty’s inventory and will facilitate establishment of new programs and will relieve some key stress points in existing facilities. No impact on existing building FCI is anticipated as part of the project.

Program: The Faculty has developed a detailed Functional Program for Applied One as a single facility. This Functional Program provided space for teaching facilities, integrated maker space and shop space, shared learning, public engagement, and student services, Mining Engineering, Materials Engineering, SALA, SCARP, Manufacturing Engineering, Integrated Engineering. The Applied One project will also provide for new accommodation for the existing daycare in the Barn.

The Functional Program will be split into two documents, for Phase 1 and Phase 2. Generally, Phase 1 will provide for teaching facilities, integrated maker space and shop space, shared learning, public engagement, and student services. Phase 2 will provide space for Mining Engineering, Materials Engineering, SALA, SCARP, Manufacturing Engineering, Integrated Engineering

Funding: Faculty and Central (through Academic Capital Fund), donor, Provincial Government funding. The estimate included is a preliminary order of magnitude and is to be validated as planning continues.

Current Approval Level: Executive 2 approval for the previous unitary Applied One project was received in December 2022. This project was on the UBC Five- Year Capital Plan submitted to the Ministry of Infrastructure’s Post-Secondary and Cross Government Capital Branch (MOI) in 2021, 2022 and 2023. The Faculty plans to present the Phase 1 Applied One Interdisciplinary Core facility for a revised Executive 2 and Executive 3 in 2025.

UBC OKANAGAN FIRE (FIRE INNOVATION, RESEARCH AND EDUCATION) FACILITY

Area: 1,206 GSM (12,980 GSF)

Estimate: \$32 million

Faculty/Department: Faculty of Science

Description/Rationale: The Okanagan Wildfire Lab will be Canada’s first advanced wildfire science facility dedicated to: wildfire behavior and resiliency testing; hands-on training in advanced fire behavior and proactive fire mitigation (prescribed fire); and development of sensors, cameras, and models to monitor and predict fire risk and behavior. By enabling wildfire combustion experiments in a controlled

setting, the lab will generate critical information on wildfire behavior and the resiliency of building and landscaping materials/plants in support of FireSmart practices and principles. By offering students in professional programs with hands-on training in fire mitigation, fire ecology and prescribed and cultural

fire, the lab will translate the latest knowledge on mitigating risk before fires occur. Building on UBC’s work with Rogers and the BC Wildfire Service to create a 5G detection and monitoring system using AI-powered cameras and sensors, the lab will provide an environment to develop and deploy new sensor technologies with applications in operational fire response and prescribed fire. The lab will also house the BC provincial wildfire camera network, creating a hub for wildfire innovation and emergency response.

Type/Location: Kelowna, in an existing building that UBC Properties Trust has acquired close to the UBC Okanagan campus Innovation Precinct.

Facility Condition Index/Risks: N/A

Program: The main level of the facility will include a high-bay research space. Equipment in the high-bay research area will include: drying ovens and a combustion chamber with tilting burn table and wind tunnel. It will have a fire spread analyses suite with high speed, thermal and, hyperspectral camera arrays. The main floor will also house an electronics and internet-of-things sensor development lab, instrumentation rooms, meeting rooms, a reception area, storage, washrooms and other building services. The second floor will house training rooms, teaching labs and additional flex space for lab expansion. The facility will have scrubbing technology that ensures smoke generated in the facility is removed before being exhausted from the building.

Funding: TBD

Current Approval Level: No approvals to date.

MASTER OF PHYSICAL THERAPY & MASTER OF OCCUPATIONAL THERAPY – INTERIOR HEALTH EXPANSION

Area: 2,409 GSM (25,930 GSF)

Estimate: \$35 million

Faculty/Department: Medicine – Physical Therapy and Occupational Therapy

Description/Rationale: The rapidly growing Interior Health region population is severely underserved by Physical Therapists and Occupational Therapists. New graduates are in high demand, and research has shown that health providers are more likely to work where they are trained. The Ministry of Infrastructure’s Post-Secondary and Cross Government Capital Branch (MOI) has indicated support for the expansion and distribution of the Master of Physical Therapy (MPT) and the Master of Occupational Therapy programs in the Interior Health region. Early consultation between MOI and the UBC Faculty of Medicine Southern Medical Program indicated a desire to accommodate the first of two proposed 20-student cohorts. Timing will depend on the outcomes of ongoing consultation and planning.

MOI has informally indicated that there may be some capital funding to support renovations to house these programs. Given UBCO’s significant space constraints, UBCO is working with local realtors to determine if there are options to purchase space in an existing commercial building, as MOI does not have capacity to support an operating lease. The FoM’s experience with distributed medical and PT/OT education has led to development of specific infrastructure and architectural, mechanical, electrical, and acoustic requirements to enable full audio visual and information technology functionality between sites. This infrastructure is uncommon in commercial buildings, so it is anticipated that renovations required will be significant. This approach is similar to that developed for the MOT and MPT Fraser Health Surrey expansion, currently in construction.

Type/Location: UBC is currently working with MOI, UBC Properties Trust and local realtors to develop options.

Facility Condition Index/Risks: N/A

Program: The program for the Interior Health region MOT and POT programs is similar to that developed for the Fraser region MOT and POT expansion in Surrey. Space needs include teaching laboratories and multi-purpose space, seminar rooms and break-out rooms, student learning commons, a teaching and research clinic, research labs and offices for new faculty, and administration workspace.

Funding: Capital funding is anticipated from the Ministry of Post-Secondary Education and Future Skills.

Current Approval Level: In planning, as discussions with MOI evolve.

MATHEMATICS BUILDING

Area: 16,828 GSM (181,700 GSF)

Estimate \$197 million

Faculty/Department: Science - Mathematics, Provost’s Office – IT Services

Description/Rationale: The proposed Mathematics Building will replace the end-of-life Mathematics, Mathematics Annex and L.S. Klinck Buildings, and consolidates the Mathematics Department in a single new building. The Department of Mathematics at UBC is one of the strongest mathematics departments in Canada. The Department has strong connections with other departments and institutes at UBC and has a major role in the cross-disciplinary Institute of Applied Mathematics (IAM), with members from across Science, Applied Science and other UBC faculties.

The layout, age, condition, and inadequate infrastructure of the existing buildings restrict pedagogical development and growth in student numbers and will not support program growth and cohesion. The Mathematics Building and the Mathematics Annex are 2-storey wood frame structures with exterior stucco and interior plaster finishes which were constructed in 1924-5 and are now at the end of their service life. The LS Klinck Building and Addition

have limited universal accessibility, lack a sprinkler system, and have been identified as Tier IV seismic risk. Although building systems and finishes have been partially upgraded over time as needs have arisen or as renovations have occurred, these buildings have large amounts of deferred maintenance. A new building will eliminate the remaining deferred maintenance and support the University’s seismic resilience and climate action planning.

The proposed plan is to build an expansion and replacement facility to address teaching and research needs, fulfill capacity requirements and provide up to date, flexible space with full infrastructure capability and the potential for greater collaboration. The project will include replacement of lecture theatres and classrooms that serve the wider precinct and will house a portion of the UBCIT staff currently working in LS Klinck. A complicated scenario of swing space and consequential moves must accompany this project.

Type/Location: UBC Vancouver. The new building will be on or near the site of the existing Mathematics and LS Klinck Buildings on West Mall, with exact location to be determined through ongoing consultation with relevant UBC stakeholders. The instruction of mathematics crosses many disciplines, and this central location will continue to provide easy access for the majority of UBC students.

Facility Condition Index/Risks: Demolition of these 3 buildings will eliminate \$57.4 million in deferred maintenance.

Associated Deferred Maintenance	DM in \$ millions	FCI	Built
Mathematics (Bldg 518)	13.1	0.79	1924
Mathematics Annex (Bldg 519)	5.1	0.82	1925
LS Klinck & Addition (Bldg 308, 308-1)	39.2	0.7	1947
Total	\$57.4		

Program: A 2012 Mathematics Master Program was updated in 2017.

Funding: Proposed funding Government, donors, UBC

Current Approval Level: Executive approval 1 for the Mathematics Building was received in May 2017. The project was on the UBC Five-Year Capital Plan submitted to MOI in 2024 and has been included since 2018.

UBC CAMPUS NETWORK REFRESH / MODERNIZATION

Area: N/A

Estimate: \$3 million

Faculty/Department: UBC IT

Description/Rationale: The University Data Network is used by every member of the UBC Community from all campuses and remote sites and is critical to UBC’s operations. The University Data Network has an estimated 110,000 current users made up of students, faculty, staff, alumni, researchers, contractors, affiliated groups, teaching hospitals, etc. At present, UBCIT’s network refresh and modernization programs target a 6 to 9-year replacement cycle but current funding and resources are insufficient to support the required level of refresh activity.

To address this shortfall and address the significant network risks, an enhanced network refresh/modernization project is proposed. The project scope includes:

- \$2.25 million for additional network hardware and associated maintenance agreements
 - o Core/Edge Network Equipment
 - o Network Software Maintenance Agreement
- \$750,000 for 3 additional resources (for 2 years) to help the network modernization/refresh team achieve the project objectives
 - o Wireless Network Analyst
 - o Network Systems Administrator
 - o Senior Network Automation Programmer

This project will reduce the number of unplanned Data Network service outages at the University, and decrease resolution time. It will also support a more stable and secure University Data Network with standard operating procedures to maintain Network Cybersecurity, patching, and critical updates.

Type/Location: UBC Vancouver, Kelowna and remote sites.

Facility Condition Index/Risks: N/A

Program: N/A

Funding: Capital funding is anticipated from the Ministry of Post-Secondary Education and Future Skills.

Current Approval Level: No approvals to date.

UBCO STUDENT HOUSING EXPANSION – PHASE 1**Area: 9,914 GSM (106,720 GSF)****Estimate: \$104 million****Faculty/Department:** Student Housing & Community Services

Description/Rationale: UBC Okanagan is facing increasing student housing demand and affordability challenges. UBC has made a commitment to add more student housing at UBC Okanagan to address these challenges. There is a desire to add approximately 273 new upper year / graduate student housing beds at the UBC Okanagan campus as part of Phase 1.

Student Housing and Community Services (SHCS) and UBC Okanagan Campus Planning (CP) have developed a high-level, two-phase concept to reach the campus housing goals. Phase 1 of the UBCO Student Housing Expansion project was included in the Five-Year Capital Plan submitted in July 2023 and a Business Case was submitted to the Province for the project in November 2024. A future Phase 2 will be an additional 250 net new beds for upper year students.

Type/Location: UBC Okanagan. SHCS and CP have identified a site south-west of Nonis Field on the UBC Okanagan campus for the two-phased plan to meet housing goals and address the demand for on-campus student housing.

Facility Condition Index/Risks: Accessing Government lower-cost financing or capital funding is critical for this project to proceed. UBC submitted a Business Case to the Province in November 2024. The outcomes of the submission are not yet clear, however, there is optimism UBC will receive a fair share of this financing and/or funding, as requested.

Program: The Project master planning and massing studies are ongoing; however, the Project is envisioned as having a preferred unit mix of 80% studio apartments and 20% shared apartment units to best accommodate upper-year students and graduate students. This facility will be designed primarily for upper-year students (those beyond their first year) but will also welcome graduate students as needed to optimize occupancy. To enhance the residential experience, the ground floor will include amenities designed to support a vibrant and functional environment for residents. These amenities are expected to feature student residence rooms and gathering spaces, providing both recreational and quiet study areas.

Funding: TBD - A combination of grant funding and loan financing is anticipated from the Province. The remaining funding will be a combination of SHCS and Central funding and financing.

Current Approval Level: Executive 2 approval was received in October 2024.

CAMPUS ENERGY CENTRE – ELECTRIC BOILER & THERMAL STORAGE

Area: TBD

Estimate: \$41.7 million

Faculty/Department: VP Finance – Energy & Water Services

Description/Rationale: UBC has made strong commitments to be a global leader on addressing climate change. The Climate Action Plan 2030—unanimously approved by the Board of Governors in December 2021—commits to reducing operational GHG emissions by 85% by 2030. A key strategy to decarbonize operations and meet this target is the proposed transition of the Academic District Energy System (ADES) to 100% clean energy by 2030. This project will build on previous investments into the ADES, including the steam to hot water conversion and the Bioenergy Research Demonstration Facility (BRDF) and is part of a broader ADES system decarbonization strategy that also includes increased waste heat recovery from the BRDF and Renewable Natural Gas (RNG) for peak loads.

The proposed project includes three scope items:

- Installation of 10 MW of electric boiler capacity in the remaining allocated space (Bay 4) at the Campus Energy Centre (CEC).
- A large thermal storage tank, to be situated adjacent to the CEC (see Attachment 1). This storage tank will allow UBC to optimize operations of the electric boiler, including running it at night when surplus electrical capacity is available in an effort to reduce demand charges, lowering utility costs.
- Electrical infrastructure upgrades (transformers, switch gear, etc.) which are proposed to be housed in a new and separate electrical house adjacent to the CEC.

Type/Location: UBC Vancouver. The project will be located within and adjacent to the CEC, located at 6130 Agronomy Road. Specifically, the electric boilers will be in the CEC, in the remaining fourth bay. The thermal storage tank and electrical house will be immediately east of the CEC.

Facility Condition Index/Risks: Proximity of the proposed thermal storage facility to Life Sciences Centre and Pharmaceutical Sciences could raise concerns for researchers due to noise and vibration impacts during construction.

Program: 10 MW electric boiler, thermal storage facility, electrical house. The combined footprint for the thermal storage tank and electrical house is approximately 350 m².

Funding: TBD; Internal financing is being evaluated.

Current Approval Level: Executive 2 approval was received in August 2024.

MEDICINE ONE

Area: 30,195 GSM (325,000 GSF)

Estimate: \$728 million

Faculty/Department: Medicine

Description: The Faculty of Medicine (FOM) proposes a new flagship Medicine 1 Building (MED-1) at the UBC Vancouver campus to provide much-needed flexible, state-of-the-art, high infrastructure, innovative research, and teaching space and to expand its translational research capacity. The facility will provide centralized facilities and resources such as select core platforms; clinical, lab and incubator spaces for existing researchers and approximately 20 new hires; engagement space for faculty and staff coming from other FoM/VCH facilities; interactive common areas and specialized communication and collision areas for interdisciplinary exchange of ideas and collaboration; high head and high infrastructure labs for strategic hires; teaching laboratories; and a permanent home for the FoM Dean’s Office (administrative staff). The new building is targeted to provide innovative, sustainable, flexible and interactive space for new types of research, teaching and synergy with partners in industry. It will consolidate existing infrastructure and equipment and will provide opportunities for collaboration amongst key stakeholders who are currently spatially segregated.

Type/Location: FOM proposes to locate MED-1 on the open site adjacent to the Life Sciences Center (LSC) at the northwest corner of Wesbrook Mall and Agronomy Road. This location is central to the health precinct and is in close proximity to Life Sciences Centre (LSC), Djavad Mowafaghian Centre for Brain Health (DMCBH), UBC Hospital, Pharmaceutical Sciences/Centre for Drug Research & Development (CDRD), and the School of Biomedical Engineering (SBME). It will be important from a land use efficiency perspective to fully utilize the site. This may mean incorporating space needs for other related programs and Faculties into the new building and special site density considerations. This site was approved by the New Building Site Selection Committee in May 2021, with the understanding that height and density parameters would be explored through an indicative design process, for further review with Campus & Community Planning.

Facility Condition Index/Risks: The Faculty of Medicine is experiencing space and facilities challenges at the Point Grey campus, which must be addressed to effectively support the Faculty’s strategic pillars of education, research, organization and partnership. Research, teaching and administrative units occupy approximately 65,000 net square metres of laboratory and office space over thirteen UBC academic and four Vancouver Coastal Health buildings at the Point Grey campus, mostly within the Health Precinct. Approximately 40% of this space is in aging, deteriorating buildings with outdated space configurations and inadequate infrastructure to support leading edge, innovative research and academic programs.

Program: A master program was developed in 2021 that includes teaching labs, research labs, super core platforms, engagement and collaboration zones, offices, and a biotechnology incubator.

Funding: TBD, notionally a combination of Government, Faculty, Central and donor funding.

Current Approval Level: Executive 1 approval was received December 10, 2019. The project was on the UBC Five-Year Capital Plan submitted to MOI in 2024 and has been included since 2021.

APPLIED ONE - ACADEMIC UNITS

Area: 20,568 GSM (221,391 GSF)

Estimate: \$282 million

Faculty/Department: Faculty of Applied Science

Description/Rationale: The proposed Applied One facility, comprised of two phases, will be an innovative environment for leading-edge approaches to learning, research, knowledge transfer and community engagement that is critical to supporting the Faculty of Applied Science strategic plan. Applied One will realize the Faculty’s aspirations to transform the way academic units work together to address global grand challenges that require complex solutions, such as climate change, urbanization, and reconciliation with historic systems of injustice. The new facility is also required to support the planned growth in the undergraduate and graduate student populations required to address the significant demands for engineering and design education and increased opportunities in the labour market. The Faculty’s multiple aging and deteriorating buildings cannot support this growth, or the innovative pedagogy envisioned.

Foundational to the concept of the Applied One building is the Faculty of Applied Science’s commitment to creating a positive impact through research and teaching that ripples out across multiple scales – from academic units, to UBC, and out to the world. Applied One will deliver on the need for spaces that support diffusive interdisciplinary research, experiential learning, and creative partnerships, and will be designed in a way that compels new learning in spaces that foster creative exploration, intercultural competence and technical innovation. Anticipated project outcomes also include the following:

- Applied One will consolidate shared resources and expertise from the entire Faculty, as well as provide new homes for the School of Architecture and Landscape Architecture (SALA), School of Community and Regional Planning (SCARP), the Norman B. Keevil Institute of Mining Engineering, and Department of Materials Engineering.
- Through providing new space to work in new ways, Applied One is intended as a catalyst for the growth of the Faculty of Applied Science.
- Beyond UBC, Applied One aims to provide dedicated spaces to connect with public and private industry programs in order to forge links between the Faculty and the world.

Phase Two: Applied One - Academic Units

Type/Location: The proposed site for the Applied One Phase 1 and Phase 2 is on Main Mall directly across from the Fred Kaiser Building, and encompasses the current footprint of the Barn. The proposed site received New Building Site Selection Committee approval on November 8, 2021.

Facility Condition Index/Risks: Applied Science occupies space in over 25 buildings, many of which are in aging and deteriorating condition. The Applied One Academic Units building will accommodate units currently in aged facilities. This includes existing facilities in the Frank Forward Building, Lasserre Building, West Mall Annex, LARC Annex, MacMillan Building, and Ponderosa Annex B. This presents a significant opportunity to free up facilities for renewal or potentially the land for redevelopment. Frank Forward Building (Mining & Materials Engineering) has an FCI of 0.76 (critical) and is rated as a Tier V seismic risk (very high risk). The Frederic Lasserre Building (existing home of majority of SALA and SCARP programs) has an FCI of 0.51 (poor), and the Landscape Architecture Annex has an FCI of 0.49 (poor).

Program: The Faculty has developed a detailed Functional Program for Applied One as a single facility. This Functional Program provided space for teaching facilities, integrated maker space and shop space, shared learning, public engagement, and student services, Mining Engineering, Materials Engineering, SALA, SCARP, Manufacturing Engineering, Integrated Engineering. Applied One will also integrate the daycare currently located in the Barn.

The Functional Program will be split into two documents, for Phase 1 and Phase 2. Generally, Phase 1 will provide for teaching facilities, integrated maker space and shop space, shared learning, public engagement, and student

services. Phase 2 will provide space for Mining Engineering, Materials Engineering, SALA, SCARP, Manufacturing Engineering, Integrated Engineering

Funding: To be determined. The estimate included is a preliminary order of magnitude and is to be validated as planning continues.

Current Approval Level: Executive 2 approval was received in December 2022. The Faculty plans to present the Phase 1 Applied One Interdisciplinary Core facility for a revised Executive 2 and Executive 3 in 2025. There is currently no target date for seeking Phase 2 Executive Approval.

The project was on the UBC Five- Year Capital Plan submitted to the Ministry of Infrastructure's Post-Secondary and Cross Government Capital Branch (MOI) in 2021, 2022 and 2023.