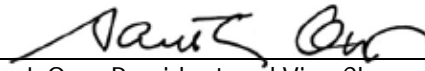


SUBJECT	CAPITAL PROJECTS UPDATE
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MEETING DATE	SEPTEMBER 12, 2019
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**APPROVED FOR
SUBMISSION**

Forwarded on the Recommendation of the President



 Santa J. Ono, President and Vice-Chancellor

FOR INFORMATION

Report Date	August 15, 2019
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Presented By Peter Smalles, Vice-President Finance & Operations
 Andrew Szeri, Provost and Vice-President Academic, UBC Vancouver
 Deborah Buszard, Deputy Vice-Chancellor and Principal, UBC Okanagan
 Ananya Mukherjee Reed, Provost and Vice-President Academic, UBC Okanagan
 Robin Ciceri, Vice-President External Relations
 Pam Ratner, Vice-Provost & Associate Vice-President Enrolment & Academic Facilities
 John Metras, Associate Vice-President, Facilities
 Jennifer Sanguinetti, Managing Director, Infrastructure Development
 Jennifer Burns, Associate Vice-President Information Technology & Chief Information Officer
 Michael White, Associate Vice-President, Campus & Community Planning
 Aubrey Kelly, President & CEO, UBC Properties Trust

EXECUTIVE SUMMARY

At each meeting, the Board receives a status update on current capital projects and capital priorities in planning. This includes details on major capital building projects (>\$5 million) as well as a summary of routine capital renewal and renovation projects (<=\$5 million). Information on Infrastructure Impact Charge (IIC) projects and Information Technology (IT) projects is also included.

Major Building Projects

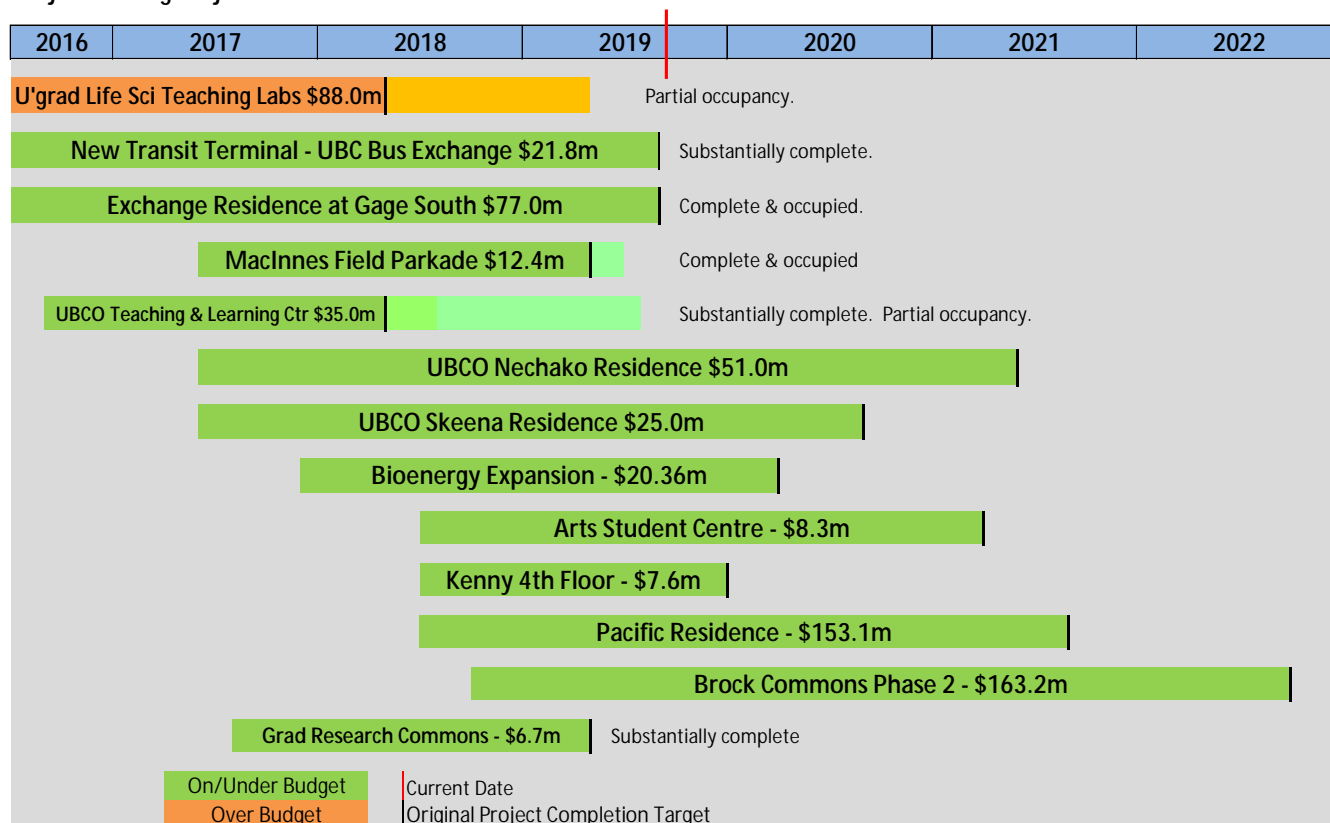
There are currently twelve major building projects in construction or design, with a total value of \$643.8 million. Ten projects are on the Vancouver campus, including the new UBC Exchange Bus Terminal and Exchange Student Residence. Two projects are on the Okanagan campus, the Nechako Residence & Commons Block and the Skeena Residence. A summary and detailed information on the capital project portfolio are provided in Attachments 1 and 2. Building projects completed since January 1, 2010 are included in Attachment 5 for reference.

The highly active construction markets in Vancouver and Kelowna are currently resulting in reduced trade contractor availability, low bid coverage on tenders and escalating costs. These challenges have impacted recent and current UBC projects and are resulting in the need for budget adjustments and in some case the use of the Retained Risk Fund to address unanticipated cost overages.

- Undergraduate Life Sciences Teaching Labs – Due to construction market conditions, site-specific issues and operational decisions the project budget has been increased from \$80 million to \$88 million. This was approved by the Board in February 2018. A subsequent contractor delay claim will add another ~\$3 million to the cost. This will be funded through Central contingency and the Retained Risk Fund.

- Graduate Research Commons/Koerner Interrelated Projects – In late 2018, the budget was increased from \$4.30m, originally set in 2014, to \$6.71m due to market escalation and scope changes. The project with updated budget was given Board 1, 2 + 3 consent via an out-of-cycle approval on October 31, 2018.
- UBCO Nechako & Skeena Residences – Significant construction cost escalation in Kelowna contributed to increased budgets for these projects both of which were granted Board 3 approval in February 2019. The budget for Skeena has increased by \$2.17m (9.5%) from Board 2 due to requirements for PassiveHouse certification, added mechanical system redundancy and construction cost escalation. Note that the PassiveHouse premium will be partially offset by life-cycle savings. Nechako increased by \$2.76m (5.7%) due to complex mixed-use design requirements as well as cost escalation.
- MacInnes Field Parkade – Increased concrete and excavation costs were managed through a cost sharing plan with the MacInnes Field public realm project. This project has now been completed on budget.
- Retained Risk Fund – The Retained Risk Fund (UBC Policy #125) provides internal “self-insurance” for major capital projects to address cost overages resulting from unanticipated construction issues that cannot be managed with standard project contingencies. The Retained Risk Fund had a total balance of \$7.48 million on August 1, 2019. This includes \$6.38m for the Vancouver campus and \$1.1m for the Okanagan campus. These balances are in compliance with the target level for the Retained Risk Fund of 1% of the value of active projects. Since the inception of the Retained Risk funds in 2009, a total of \$7.89 million has been paid out for projects on both campuses. This represents 0.6% of the total value of projects undertaken during that time.

Major Building Project Status



Major IT Projects

Major information technology projects currently in planning or implementation include the Integrated Renewal Program (IRP - Student, HR, Finance and IRP Application Ecosystem Program), the Digital Research Infrastructure program, and the Enterprise Data Integration program. The Recruitment - Customer Relationship Management (CRM) System and Learning Technology Ecosystem programs are now complete and will be coming forward for Board 4 Completion Reports at a future date. A listing of major IT projects is provided in Attachment 3.

Upcoming Board Approval Requests

Project Name	Sep 2019	Dec 2019	Feb 2020	Apr 2020
Arts Student Centre	Board 1		Board 2	
Pacific Residence	Board 3			
Brock Commons Phase 2 Mixed-Use Student Housing	Board 2			Board 3
Nursing & Kinesiology Building		Board 1		

Routine Capital Projects

Routine capital includes cyclical maintenance, rehabilitation, upgrade and renovation projects associated with campus buildings and infrastructure. These projects are generally valued less than \$5m and are funded from a variety of internal sources - Building Operations, Energy & Water Services, Faculties/Departments, Student Housing & Hospitality Services, Athletics, and Parking – as well as with a contribution from the Ministry of Advanced Education, Skills & Training (AEST) for capital maintenance of core academic facilities.

AEST has increased Routine Capital funding to UBC to address much needed capital maintenance in campus buildings. The amounts are as follows:

- 2018/19: \$39.50m (received)
- 2019/20: \$39.50m (planned)
- 2020/21: \$39.50m (planned)
- 2021/22: \$39.50m (planned)

AEST has specified that these funds be directed toward reduction of deferred maintenance in core academic facilities and that the overall package of projects in each year must be cost-shared between AEST and UBC on a 75%/25% basis. A small portion of the funding (\$1.66m) is allocated toward Carbon Neutral Capital Program projects.

The UBC Facilities team (Infrastructure Development, Building Operations, and Energy & Water Services) develop the specific projects for the AEST-funded routine capital program based on facility condition assessment and input from department administrators regarding building user priorities. Synergies are sought with other infrastructure renewal and modernization requirements such as learning space upgrades, accessibility upgrades and seismic upgrades. Most projects are less than \$5.0 million and consist of core building system renewals such as roof and envelope repairs, elevator retrofits, electrical infrastructure projects, fire and life safety system retrofits, minor interior refit projects (such as flooring replacements and washroom refurbishments), and utilities infrastructure improvements. Example projects in this category for 2019/20 include:

- Koerner Library replacement of failed glazing units - \$1.18 m
- Michael Smith Labs chiller - \$837k

- School of Population and Public Health, Biomedical Research Centre fire alarm renewal - \$300k
- Biomedical Research Centre elevator renewal - \$167k
- Chan Roof Replacement Phase 1 - \$835k

Some whole building renewal projects are also undertaken as part of the AEST-funded program to address a full range of deferred maintenance items, seismic upgrade requirements and facility modernization. These projects are larger in scope and fall above the \$5m Board-approval threshold. Given the necessity to plan and execute these projects in very tight timelines, it was previously agreed that they would be approved by the Board as part of the annual Operating Budget approval process. This agreement is documented in Policy 126 (Capital Projects, Capital Purchases & Internal Loans), section 5.6. Examples of these projects include:

- Old SUB renewal and swing space (UBC Life Building) - \$33m (2016/17, 2017/18). This project is complete.
- Hebb Tower renewal - \$34.40m (2017/18, 2018/19, 2019/20). This project is in construction and will be completed in late 2019. Hebb teaching spaces have moved to the UBC Life Building for the duration of construction.
- Museum of Anthropology roofing, envelope and seismic upgrade - \$22m (2018/19, 2019/20, 2020/21). Design nearing completion. Construction to start in September 2019.
- MacLeod Building renewal and seismic upgrade - \$48m (2019/20, 2020/21, 2021/22). Design to commence in 2019/20.

An overview of the routine capital program is provided in the 2019/20 Operating Budget.

Significant current capital projects outside the AEST-funded program include:

- 1) Museum of Anthropology (MOA) Education Centre - \$4.56 million
 - Provides new theatre gallery for public education programming. Funded by Canadian Heritage, donor funding, MOA reserves and operating budget, and Faculty of Arts operating budget. The scope and budget of this project is currently being reviewed. There has been a partial donor commitment but it is not enough for the full project envisioned so a review of options is underway.
- 2) 3T MRI Imaging Lab (Centre for Brain Health) - \$3.24m
 - Provides the facility for a new 3T whole body MRI for research use. Funded through Canada Foundation for Innovation (CFI)/BC Knowledge Development Fund (BCKDF), Faculty of Medicine, Vancouver Coastal Health Research Institute and Central operating budget. Imaging equipment procurement is separate.
- 3) PET MRI Imaging Lab (Centre for Brain Health) - \$4.61m
 - Provides facility for new PET MRI for research use. Funded through CFI/BCKDF. Imaging equipment procurement is separate.
- 4) Wellington MRI Lab Addition at Centre for Comparative Medicine - \$3.21m
 - Magnetic resonance imaging (MRI) suite for innovative research on traumatic brain injury. Funded through CFI/BCKDF, vendor in-kind contribution, department funding and donor funding. Imaging equipment procurement is separate.

- 5) Faculty of Medicine Dean's Office, Djavad Mowafaghian Centre for Brain Health - \$3.30m
 - Provides office space that will house the Faculty of Medicine Dean's Office, bringing several staff groups together that are now housed separately and allowing for future growth.
- 6) Integrated Health Services Short Term Solutions - \$3.69m
 - Provides space to meet the demand for student health services between 2019 and 2022, after which the services will be housed in the proposed Kinesiology and Nursing facility on Gateway South. The scope includes the provision of a modular building adjacent to Brock Hall and the renovation of space in the lower level of Orchard Commons.
- 7) Geological Field School (Faculty of Science) - \$2.75m
 - Donor-funded project near Oliver, BC. Scope includes updating and expanding this historic facility including residences, dining facilities and a lecture hall.

Infrastructure Impact Charge (IIC) Program

The IIC program includes utility, roads and public realm projects required to meet the needs of campus growth. Funding is provided through Infrastructure Impact Charges on neighbourhood and ancillary development projects. A separate information report on the IIC program is provided annually to the Board.

Capital Priorities in Planning

Attachment 4 shows proposed major capital building projects currently in planning that have not yet been brought forward for Board approval. The UBC Executive undertakes an annual prioritization of major capital projects with assistance from the Capital Planning Working Group and input from campus stakeholders. This process generates an updated Five-Year Capital Plan that is submitted each year to the Provincial government. **The latest Five-Year Capital Plan (2020/21 – 2024/25) was approved by the Board of Governors in June 2019 and submitted to the Province. The projects in Attachment 4 have been updated to reflect the latest Five-Year Capital Plan and other future capital priorities.**

Proposed capital projects are evaluated and prioritized using an assessment model that considers how each project contributes to the University's strategic objectives and operational performance & risk mitigation objectives. Consistent with *Shaping UBC's Next Century* the 2018-28 strategic plan, the prioritization criteria that were used in the 2019 round of capital planning are shown below. These criteria and weightings were changed slightly as part of the 2019 capital planning process based on stakeholder input. These changes were presented as part of the Five-Year Capital Plan approval submission at the June 2019 Board meeting:

- 1) **University Strategic Priorities (100%)**
 - People & Places – 15%
 - Research Excellence – 35%
 - Transformative Learning – 35%
 - Local & Global Engagement – 15%
- 2) **Operational Performance and Risk Mitigation (100%)**
 - Health & Safety (e.g. seismic risk) – 25%
 - Performance & Reliability (e.g. deferred maintenance) – 25%
 - Legal / Regulatory / Reputation – 25%
 - Business Case – 25%

Initial prioritization is “needs-based” therefore funding potential is not a criterion. Input on the capital planning process and capital priorities is sought from the following groups:

- Committee of Deans
- Property & Planning Advisory Committee
- Senate Academic Building Needs Committee, UBC Okanagan Space Management Committee
- Vancouver Subcommittee of the Council of Senates Budget Committee
- UBC Okanagan Senate Building and Resource Committee
- Information Technology Advisory Committee
- Alma Mater Society, UBC Students’ Union Okanagan
- Graduate Student Society
- Alumni Association
- Building Operations and Energy & Water Services, UBC Okanagan Campus Operations
- UBC Properties Trust (for information)

Seismic Mitigation Plan

The seismic resilience plan for the Vancouver campus has been updated. Seismic hazard and screening-level building vulnerability assessments were completed by our consultant (Arup). The hazard assessment quantifies the seismic hazard facing the campus and reflects current knowledge of earthquake types, intensities, return periods and probabilities. These assessments led to a recommended list of priority buildings for which detailed structural engineering analysis using advanced 3D modelling coupled with physical testing was completed to determine specific structural vulnerabilities, retrofit strategies and costs. Arup additionally provided a set of operational recommendations to improve campus resilience in the event of a major earthquake. The draft seismic resilience plan, incorporating the results of the detailed engineering analysis as well as updates on the completed operational and utility improvements, was presented to the Board in February 2019.

Attachments

1. Capital Projects Update – Summary by Project Type and Board Approval Level
2. Major Capital Building Projects – Detailed Information
3. Information Technology (IT) Projects – Detailed Information
4. Capital Plan + Future Priorities
5. Capital Projects Completed since January 1, 2010

STRATEGIC CORE AREAS SUPPORTED

a People and Places a Research Excellence a Transformative Learning a Local / Global Engagement

DESCRIPTION & RATIONALE The Capital Projects Update provides summary information on major capital building projects (>\$5 million), routine capital renewals and renovations, Infrastructure Impact Charge (IIC) projects and Information Technology (IT) projects.

Details provided on major building projects include schedule, budget, costs to date, confirmed funding sources, outstanding unfunded amounts, and debt financing requirements for each project. Also included is an estimate of the impact that each project has toward reducing the University’s deferred maintenance backlog, either due to demolition of old facilities to make way for new construction or as the result of major building renewal.

A separate section on Capital Priorities is included to show proposed projects currently in planning that have not yet been brought forward for Board 1 approval. These Capital Priorities have been determined through consultation with academic and operational stakeholders on both the Vancouver and Okanagan campuses. Final decisions on capital priorities are made by the UBC Executive and the Board.

Information on major building projects completed since 2010 is also provided.

BENEFITS Learning, Research, Financial, Sustainability & Reputational	Ongoing capital investment in physical infrastructure and information technology provides direct support and significant benefit to UBC's core strategy areas – People & Places, Research Excellence, Transformative Learning, and Local & Global Engagement.
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RISKS Financial, Operational & Reputational	Capital projects are subject to cost, schedule and funding risks. These risks are managed through careful planning, on-going monitoring and use of contingency allowances in project budgets. UBC also has in place a Retained Risk Fund (RRF) for building projects >\$2.5 million. The RRF acts as an internal self-insurance fund to address unforeseen cost impacts that cannot otherwise be addressed through standard project contingencies. Each major capital project pays into the RRF and is eligible for support with approval from the Provost and Vice-President, Finance & Operations as per the terms of Policy #125 – Retained Risk Fund for Major Capital Projects.
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In addition, the project management teams at both UBC Properties Trust and Project Services (Infrastructure Development) have re-examined their risk and contingency practices in light of the rapidly escalating construction market as well as other current issues faced by project teams including increasing quantities of hazardous materials being discovered in building renewal or demolition projects. While every project has always created a risk register, an updated format with increased focus on quantifying the cost impact of risk has been added. In addition, higher, standardized contingencies have been set for projects moving forward.

Construction escalation has continued to pressure project budgets of all sizes. The Bioenergy Facility Expansion and UBCO Nechako and Skeena Residence projects all required budget increases due in part to these market influences. As has been noted in previous updates, escalation is still present in the both the Kelowna and Vancouver markets so estimates are still carrying a 6% cost escalation contingency.

COSTS Capital & Lifecycle Operating	Cost details on current projects are provided in the Attachments.
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FINANCIAL Funding Sources, Impact on Liquidity	Funding and financing details on current projects are provided in the Attachments.
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SCHEDULE Implementation Timeline	Schedule details on current projects are provided in the Attachments.
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CONSULTATION
Relevant Units,
Internal & External
Constituencies

Major building projects at UBC are developed in consultation with campus stakeholders and are subject to Executive and Board approval processes as well as a review and approval process by Campus & Community Planning (C&CP) for issuance of a development permit (DP). The DP process involves review of the project schematic design by the Advisory Urban Design Panel (AUDP) and the Development Review Committee (DRC). A public open house is held for each DP application in order to engage with the campus community and solicit input on the proposed project.

UBC Capital Priorities are developed in accordance with the University's established **Capital Planning Principles**, as follows:

1. **Academic Consultation** - Capital infrastructure needs and priorities are identified through on-going consultation with academic stakeholders including Deans, Provost's Office, Deputy Vice Chancellor Office (Okanagan campus), VP Students Office, VP Research and Innovation Office and unit heads.
2. **Funding Allocation** - UBC capital funding (exclusive of government funding, self-funding projects such as student housing, and donor funding) should be allocated among infrastructure categories according to the following target ratio: 70% academic, 20% student experience, 10% campus community. This is the best current estimate of the allocation to support learning and research priorities, meet student needs and provide necessary community infrastructure. The allocation model is regularly reviewed. Allocation of UBC capital funding for recent, current and planned projects is as follows:

	Academic	Student Experience	Campus Community
<i>Target allocation</i>	70%	20%	10%
Projects completed since January 1, 2010	58%	17%	25%
Current projects in design or construction	80%	20%	0%
Five-Year Capital Plan projects	78%	16%	6%
Future priorities	78%	21%	1%
Total of all projects above	70%	18%	12%

3. **Operational Overlay** - Building Operations, Energy & Water Services and Risk Management Services are consulted to determine deferred maintenance, seismic and other operational priorities and opportunities for synergies.
4. **Fundraising and Financing Assessment** - The Development Office prepares donor fundraising assessments for specific projects and establishes fundraising goals with reasonable (though not guaranteed) probabilities of success based on known donor prospects. Treasury determines the available financing capacity for specific projects based on current and projected internal liquidity.
5. **Efficiency** - Stated infrastructure needs are assessed against accepted standards. The proposed Capital projects are those that provide the most effective and efficient use of land, building space and capital. Opportunities are sought to optimize and re-use existing infrastructure first before replacing or expanding. Academic priorities are synergized with infrastructure renewal/seismic priorities wherever possible.

6. **Flexibility** - Flexibility is allowed in the Capital Plan in order to respond to emerging priorities and funding opportunities. Funding opportunities and financing capacity are key factors in determining project timing.
7. **Integration** - The Capital Plan is developed through integration of academic needs, strategic priorities, infrastructure renewal and risk management requirements, target UBC funding allocation and alignment with government priorities. The Provost and VP Academic (Vancouver campus) and Deputy Vice Chancellor (Okanagan campus) make the final recommendations on capital priorities to be presented for Executive and Board approval.
8. **Approval** - Capital priorities are reviewed and approved by the Executive, and then the Board of Governors, at least once per year. Mandatory approval is required in advance of submission of the UBC Five-Year Capital Plan to the Province in June each year.
9. **On-going Review** - Minor adjustments to the capital priorities can take place throughout the year in response to emerging issues and opportunities. The Board receives an up to date list of capital priorities at every Board meeting.

Previous Report Date	June 13, 2019
Decision	For Information
Action / Follow Up	

Capital Projects Update - Summary by Project Type and Board Approval Level
As of June 30, 2019

Dollar figures are all in \$000's

Project Type/ Approval Level	GBA (s.f.) ¹	Project Budget (\$000's)	Projected Final	Costs to Date	Confirmed Funding Sources								Unfunded	% Unfunded	Reduction to Deferred Maintenance ²	Financing			
					Prov Gov	Fed Gov	UBCV Central	UBCO Central	Land Dvpt Costs or Taxes	Self-Funded	Faculty or Unit Funded	Fundraising				UBC Central Debt	Self-Funded Debt	Faculty / Unit Debt	Total Debt
Infrastructure Projects																			
<i>Major Capital Buildings</i>																			
Board 1 - In design	369,800	\$171,477	\$173,934	\$957	\$0	\$0	\$37,079	\$0	\$500	\$109,284	\$17,564	\$5,315	\$4,192	2.41%	\$0	\$37,079	\$113,049	\$15,064	\$165,192
Board 2 - In design	360,000	\$160,138	\$160,138	\$1,839	\$0	\$0	\$0	\$0	\$0	\$160,138	\$0	\$0	\$0	0.00%	\$0	\$0	\$160,138	\$0	\$160,138
Board 3 - In construction	778,411	\$312,197	\$315,197	\$194,528	\$26,259	\$40,137	\$49,844	\$1,957	\$17,329	\$161,606	\$12,168	\$2,559	\$3,339	1.06%	\$79,094	\$49,444	\$161,615	\$0	\$211,059
Complete - Board 4 pending	791,820	\$434,382	\$441,280	\$433,596	\$54,792	\$46,658	\$107,460	\$731	\$42,150	\$79,573	\$15,014	\$94,621	\$283	0.06%	\$2,827	\$27,600	\$159,908	\$30,315	\$217,823
Major Capital Building Projects	2,300,031	\$1,078,194	\$1,090,550	\$630,920	\$81,051	\$86,794	\$194,382	\$2,688	\$59,979	\$510,601	\$44,746	\$102,495	\$7,814	0.72%	\$81,921	\$114,123	\$594,710	\$45,379	\$754,212
<i>Routine Capital Projects</i>																			
Building Operations/ Energy & Water Services (Provincial funding)		\$49,140	\$49,140	\$2,871	\$37,276	\$0	\$11,864	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,140	\$0	\$0	\$0	\$0
Faculties/Departments		\$105,900	\$103,074	\$43,368	\$5,916	\$16,852	\$0	\$0	\$0	\$0	\$67,874	\$0	-\$15,259	\$0	\$105,900	\$0	\$0	\$0	\$0
Student Housing & Hospitality		\$20,040	\$20,238	\$3,926	\$0	\$0	\$0	\$0	\$0	\$0	\$20,238	\$0	\$199	\$0	\$20,040	\$0	\$0	\$0	\$0
Parking Services		\$4,084	\$3,523	\$1,216	\$0	\$0	\$0	\$0	\$0	\$4,084	\$0	\$0	\$0	\$0	\$4,084	\$0	\$0	\$0	\$0
Athletics		\$952	\$952	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$721	\$231	\$0	\$0	\$952	\$0	\$0	\$0	\$0
UBC Okanagan		\$20,500	\$22,050	\$5,445	\$1,165	\$0	\$11,124	\$606	\$0	\$4,471	\$2,000	\$0	-\$1,134	\$0	\$20,500	\$0	\$0	\$0	\$0
Routine Capital Building Projects ³		\$200,616	\$198,978	\$56,825	\$44,357	\$16,852	\$22,988	\$606	\$0	\$8,555	\$90,833	\$231	-\$16,194	\$0	\$200,616	\$0	\$0	\$0	\$0
Infrastructure Impact Charge (IIC) Projects ⁴		\$1,820	\$2,050	\$230	\$0	\$0	\$0	\$0	\$2,050	\$0	\$0	\$0	\$0	\$0	\$0	\$2,050	\$0	\$0	\$2,050
Subtotal - Infrastructure Projects		\$1,280,631	\$1,291,577	\$687,975	\$125,408	\$103,646	\$217,370	\$3,294	\$62,029	\$519,156	\$135,579	\$102,726	-\$8,380	\$0	\$282,537	\$116,173	\$594,710	\$45,379	\$756,262
Information Technology Projects																			
Major IT Projects		\$164,260	\$161,600	\$80,389	\$0	\$0	\$161,600	\$0	\$0	\$0	\$0	\$0	-\$2,660	-1.62%	\$0	\$161,600	\$0	\$0	\$0
Routine IT Projects		\$36,500	\$36,035	\$8,811	\$3,727	\$2,197	\$0	\$13,168	\$1,164	\$0	\$100	\$9,384	\$0	\$10,286	\$0	\$0	\$0	\$0	\$0
Subtotal - IT Projects⁵		\$200,760	\$197,635	\$89,200	\$3,727	\$2,197	\$161,600	\$13,168	\$1,164	\$0	\$100	\$9,384	-\$2,660	-1.35%	\$0	\$161,600	\$0	\$0	\$0
Grand Total	\$ 2,300,031	\$1,481,390	\$1,489,212	\$777,176	\$129,134	\$105,843	\$378,970	\$16,461	\$63,193	\$519,156	\$135,679	\$112,110	-\$11,040	-0.74%	\$282,538	\$277,773	\$594,710	\$45,379	\$756,262

1 - Gross building area is the total floor area including the unrentable area in square feet.

2 - Current total deferred maintenance for Vancouver campus is \$1.28 billion per AVED facility condition database for core academic buildings (not including student housing, athletics facilities and parkades).

3 - Cyclical maintenance, rehabilitation, upgrade and renovation projects >\$50,000 and <=\$5 million underway or completed in current fiscal year. Includes projects funded by AVED, Building Operations, Energy & Water Services, Faculties/Departments, Student Housing & Hospitality Services (SHHS), Athletics and Parking.

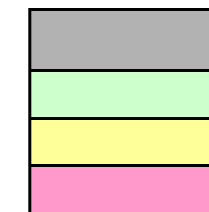
4 - IIC funded utility, roads and public realm projects underway or completed in current fiscal year. A separate report on the overall IIC Plan is also provided annually to the Board.

5 - IT projects, major (>\$5 million) and routine (>\$50,000 and <=\$5 million), currently in planning/design or completed in the fiscal year.

Major Capital Building Projects - Detailed Information

As of June 30, 2019

Dollar figures are all in \$000's



Grey = Complete, Board 4 Pending

Green = Board 3

Yellow = Board 2

Pink = Board 1

Dollar figures are all in \$000's

Attachment 2

Project Name	Faculty / Dep.	Schedule			Capital Cost				Current Status/ Issues + Variances	Funding								Reduction to Deferred Maintenance	Financing			Total Debt	Funding/Financing Comments		
		Target Completion Final Approved	% Compl.	Actual Completion (Occupancy)	Gross Building Area (SF) Final Approved	Budget Final Approved	Projected Final Cost	Costs to Date		Confirmed Funding Sources									UBC Central Debt	Self-Funded	Faculty/ Unit Debt				
		Prov Gov	Fed Gov	UBCV Central	UBCO Central	Land Dvpt Cost or Taxes	Self-Funded	Faculty or Unit Funded		Fundraising	Unfunded	% Unfunded	UBC Central Debt	Self-Funded	Faculty/ Unit Debt										
UBC-Vancouver																									
Djavad Mowafaghian Centre for Brain Health	Vancouver Coastal Health/ Centre for Brain Research	OCT-13	100%	NOV-13	152,558	\$69,757	\$71,801	\$69,190	Completed and occupied. Basement fit-out underway for Preclinical Discovery Centre (PDC). Additional PDC cost covered by internal sources.	\$24,565	\$19,716	\$1,348				\$900	\$25,271	\$0	0.00%				\$0	Included in the Faculty fundraising amount is approx \$3.4M investment income earned from provincial and federal funding received.	
Baseball Training Facility	Athletics	DEC-15	100%	SEP-15	20,000	\$3,500	\$3,885	\$3,885	Completed and occupied. Costs include \$416K in client-requested scope additions which have been recovered from client.							\$269	\$3,616	\$0	0.00%				\$0	Project has gone over the budget due to client-requested scope additions. Unfunded amount amount to be covered by Athletics.	
Iona Building Acquisition- Vancouver School of Economics	Arts	DEC-15	100%	DEC-15	99,663	\$33,500	\$34,000	\$33,995	Completed and occupied. Arts funded \$500k for additional 100-seat lecture theatre.			\$15,000			\$2,300	\$5,600	\$11,100	\$0	0.00%		\$15,000		\$18,500	\$33,500	Arts added \$0.5M for 100 seat lecture theatre.
UBC Vancouver District Energy System	Energy & Water Services	DEC-15 Old Steam Plant Demo DEC-16	97%	JUN-16 Old Steam Plant Demo TBD	N/A	\$88,300	\$88,300	\$85,594	System completed and in-use. Allowance remaining for demolition of old Powerhouse.	\$6,955		\$71,345	\$10,000					\$0	0.00%			\$71,345		\$71,345	Received 6.95M from AVED. Max of \$78.3M internal financing to be repaid from Energy & Water Services budget using cost savings generated by the project.
Aquatic Centre	Athletics	NOV-16	100%	DEC-16	74,448	\$39,900	\$39,910	\$40,129	Complete and occupied.				\$28,500				\$11,410	\$219	0.55%			\$11,290		\$11,290	Unfunded amount reflected cost over run, amount will be cover by Athletic.
Henry Angus Tower - Seismic Upgrades	C&CP	SEP-16	96%	JAN-17		\$4,162	\$4,592	\$4,646	Completed and occupied. Additional costs related to utility system damage to be recovered from contractor insurance.			\$4,592						\$0	0.00%					\$0	
Quantum Matter Institute / Advanced Materials & Process Engineering Laboratory	Applied Science/ Science	OCT-16	100%	APR-17	51,667	\$30,269	\$32,156	\$32,015	AMPEL renovation complete. Additional cost is a funded increase.		\$3,345	\$13,475			\$7,336	\$8,000	\$0	0.00%			\$12,600		\$3,323	\$15,923	
National Soccer Development Centre - Field House Training Facility & Practice Fields (Vancouver Whitecaps - UBC Athletics Partnership)	Athletics	Fields OCT-15 Fieldhouse DEC 16	100%	JUN-17	37,980	\$27,244	\$27,244	\$26,356	Completed and occupied. UBCPT cost to date doesn't include the Doug Mitchell change room reno cost (\$1,042,024) which was part of approved budget.	\$11,006		\$1,400	\$3,650				\$11,188	\$0	0.00%				\$0	UBCPT contributing total of 3.3M (825K for Core project + 2.475M for relocation cost to consolidate uses within Thunderbird Park) to the project.	
Museum of Anthropology - Northwest Coast Masterworks Gallery	Arts	MAR-17	91%	JUN-17	2,700	\$4,100	\$4,100	\$3,715	Completed and occupied. Some remaining deficiency work to address.		\$1,500						\$2,600	\$0	0.00%	\$0				\$0	
Indian Residential School History & Dialogue Centre	First Nations House of Learning	JUL-17	100%	JUN-17	6,523	\$5,500	\$5,800	\$5,508	Completed and occupied. AV exhibit is on-going and is being completed by client. The value of AV is approx. 1.3M. The additional \$300K is a funded increase.				\$300				\$5,500	\$0	0.00%	\$0				\$0	Undesignated donor funding has been allocated to cover the full project cost.
Brock Commons Phase 1 - Tall Wood Student Residence	SHHS	SEP-17	100%	JUL-17	162,750	\$51,525	\$51,525	\$50,828	Completed and occupied. Project anticipated to be under budget.	\$1,650	\$2,802							\$0	0.00%	\$0		\$47,073		\$47,073	\$47.1M internal loan to be repaid with future rental revenue.
Totem Park Residence In-Fill (Phase 2)	SHHS	AUG-17	98%	JUL-17	99,951	\$30,200	\$30,200	\$30,200	Completed and occupied. Sports Court costs (\$1.3m) funded by SHHS as an extra/scope add to the project.						\$30,200			\$0	0.00%	\$0		\$30,200		\$30,200	\$30.2M internal loan to be repaid with future rental revenue.
Sports Medicine Centre - Chan Gunn Pavilion	Medicine/ Education (Kinesiology)	SEP-17	100%	OCT-17	21,173	\$11,425	\$11,640	\$11,625	Final occupancy received. \$215K overage projected that is to be covered by Sports Medicine & Kinesiology.		\$4,731					\$909	\$5,936	\$64	0.55%	\$2,827			\$716	\$716	Funding shortage due to share donation realized at lower than original expected amount.
IIC Public Realm Projects	C&CP	To be completed in phases over a 15 year period.			N/A	Please refer to IIC Plan	Please refer to IIC Plan	Please refer to IIC Plan	Please refer to IIC Plan											Please refer to IIC Plan	Please refer to IIC Plan		\$0	Public Realm projects are funded by Infrastructure Impact Charges.	
Geological Field School	Science	TBC	14%		10,824	\$2,400	\$2,400	\$376	Funding commitment received by Donor (Oct 2018) Project mobilising. Detailed design underway and DP application anticipated in January 2019.								\$2,061	\$339	14.13%					\$0	Unfunded amount is expected to be filled from fundraising.
Undergraduate Life Sciences Teaching Labs Renew	Science/ Medicine	JAN-19	81%		176,625	\$88,000	\$91,000	\$74,489	Partial occupancy achieved in early Aug. Users have commenced move-in. Contractor delay claims settled. Will result in approx \$3m additional cost. This will be funded equally through Central contingency and Retained Risk Fund.	\$11,838	\$32,528	\$43,635					\$3,000	3.30%	\$39,547		\$43,235		\$43,235	43.2M loan will be paid from Central operating budget.	
UBC Exchange (New Bus Transit Terminal)	C&CP	AUG-19	95%		N/A	\$21,750	\$21,750	\$20,680	Project occupancy received in May. Tracking under budget.	\$9,421			\$12,329					\$0	0.00%	\$0				\$0	TransLink to provide up to \$8.84 M plus an allowance for cost escalation.
Exchange Residence (at Gage South)	SHHS	AUG-19	95%		290,000	\$76,973	\$76,973	\$73,218	Project occupancy received in May. Tracking under budget.						\$76,973			\$0	0.00%	\$0		\$76,973		\$76,973	Project currently proposed to be financed through an internal loan.
MacInnes Field Underground Parkade	Parking	SEP-20	79%		64,966	\$12,435	\$12,435	\$11,569	Final occupancy received and facility is being occupied. Project is anticipated to be on budget.						\$12,435			\$0	0.00%			\$12,435		\$12,435	
Graduate Research Commons/Koerner Library Interrelated Projects	Science/ Medicine	JAN-19	65%		19,041	\$6,707	\$6,707	\$4,662	Four out of five project phases are complete. Final phase scheduled for completion in June 2019.			\$6,209				\$498	\$0	0.00%	\$39,547		\$6,209		\$6,209	\$6,209	6,209 internal loan services from central operating budget with 398 from donor funding and 100 from Copyright Services
Bioenergy Facility Expansion Project	EWS	SEP-20	4%			\$20,361	\$20,361	\$1,206	Design complete. Tenders received. Project is within budget. Construction contracts to be awarded.	\$5,000	\$7,609		\$5,000	\$2,752				\$0	0.00%			\$2,761		\$2,761	\$2.752M loan will be paid by Energy & Water Services from savings achieved compared to a business as usual (BAU) situation. Short-term bridge financing may be required to address multi-year timing of IIC and CNCP Funding.
Arts Student Centre	Arts	MAR-21	3%		9,800	\$8,315	\$10,772	\$457	The ASC has been relocated to be adjacent to Brock Commons Phase 2 development. The design is having to be restarted and most of the work complete to date is not transferable to the new site. Anticipated completion date will be adjusted but is uncertain at this time.				\$500		\$2,500	\$5,315	\$2,457	22.81%			\$3,765		\$3,765	AMS will take out a loan and repaid using future student fees collect.	
Douglas T. Kenny Building 4th Floor Renovation	Arts	DEC-19	6%		15,650	\$7,640	\$7,640	\$941	Project now has Board 3 approval						\$7,640			\$0	0.00%					\$0	Faculty of Arts & Dept of Psychology will fund this project from reserves.
Pacific Residence	SHHS	JUL-21	1%		360,000	\$160,138	\$160,138	\$1,839	\$1.2 M budget increase to be presented at Board 3 (cost increase offset by increase in bed count). Tender results expected in early September. Public realm portion of project will be tendered towards the end of the year.						\$160,138			\$0	0.00%			\$160,138		\$160,138	153.1M loan will be repaid with future rental revenue.
Brock Commons Phase 2 Mixed-Use Housing Development	SHHS	Sep-22	0%		360,000	\$163,162	\$163,162	\$500	Board 2 updated budget and program to be presented to BoG in Sep. Project received AUDP approval in July 2019.			\$37,079			\$109,284	\$15,064		\$1,735	1.06%		\$37,079	\$109,284	\$15,064	\$161,427	Discussions are underway with Peter A. Altard School of Law to confirm its funding for the legal clinic space.
SUBTOTAL (UBC-V)					2,036,319	\$967,263	\$978,490	\$587,623		\$70,435	\$72,231	\$194,382	\$0	\$59,979	\$441,155	\$40,218	\$92,495	\$7,814	0.80%	\$81,921	\$114,123	\$525,264	\$37,603	\$676,990	
UBC-Okanagan																									
Teaching & Learning Centre (The Commons)	UBCO Library	APR-18	100%	DEC-18	62,407	\$35,000	\$36,128	\$35,910	UBCO has approved the post occupancy changes, valued at approximately \$185K. All post occupancy work to be complete before September 2019.	\$10,616	\$14,564		\$731			\$10,000	\$0	0.00%				\$7,776	\$7,776	Unfunded amount due to cost overrun and most likely will be cover by Student Levy.	
Nechako Residence	SHHS	JAN-21	6%		128,654	\$50,950	\$50,950	\$4,421	Construction Underway. Completion targeted summer 2021			\$1,957		\$46,634	\$2,359		\$0	0.00%			\$46,634		\$46,634	\$46,634	Loan will be paid from future student housing rental and meal plan revenue.
Skeena Residence	SHHS	AUG-20	7%		72,651	\$24,981	\$24,981	\$2,966	Construction Underway. Completion targeted summer 2020					\$22,812	\$2,169		\$0	0.00%			\$22,812		\$22,812	\$22,812	Capital cost to be internally financed with debt service paid from systemwide student housing rental and meal plan revenue.
SUBTOTAL (UBC-O)					263,712	110,931	112,059	43,297		\$10,616	\$14,564	\$0	\$2,688	\$0	\$69,446	\$4,528	\$10,000	\$0	0.00%	\$0	\$0	\$69,446	\$7,776	\$77,222	
GRAND TOTAL					2,300,031	\$1,078,194	\$1,090,550	\$630,920		\$81,051	\$86,794	\$194,382	\$2,688	\$59,979	\$510,601	\$44,746	\$102,495	\$7,814	0.72%	\$81,921	\$114,123	\$594,710	\$45,379	\$754,212	

1 - Final Approved figures differ from Board 3 figures in those cases where the Board of Governors has approved a post-Board 3 scope, schedule and/or budget change. Note also that this column is used to total all project budgets so includes the latest figures for projects at the Board 1 and Board 2 approval stage.

Current 2019/20 priorities identified through Five-Year Capital Plan development process including campus-wide stakeholder consultation. The capital priorities list is regularly updated to reflect latest approvals and any budget, funding and schedule changes.

Project Name	Faculty / Dept	Completion	Gross Building Area	Capital Cost (\$000s)	Current Status	
Rank	ACADEMIC PROJECTS (Five-Year Capital Plan projects in red)	Faculty / Dept	Target Completion	Gross Area (sf)	Capital Cost (\$000s)	Current Status
1	School of Biomedical Engineering	Applied Science/Medicine	2023	108,177	\$76,000	Exec 1
2	Nursing & Kinesiology Building	Nursing/Kinesiology	2023	186,700	\$134,000	Exec 1
3	Chemistry Lab Complex	Science	TBD	253,000	\$224,000	Exec 1
4	Interdisciplinary Collaboration & Innovation Building - UBCO	UBCO Multi-Faculty	2024	165,000	\$130,000	Exec 1
5	Mathematics Building	Science	TBD	126,000	\$118,000	Exec 1
	Seismic Upgrade Projects	Central Administration	TBD	TBD	\$867,000	In planning
	Academic Building Expansion - UBCO	UBCO Multi-Faculty	2026	65,000	\$53,000	In planning
	Academic Conference Centre - Hotel	SHHS/St.John's College	TBD	TBD	TBD	Exec 1
	Applied One	Applied Science	TBD	317,000	\$221,900	Exec 1
	Asian Centre	Arts/Library	TBD	68,000	\$30,000	Exec 1
	Belkin Expansion	Arts	TBD	8,500	\$8,000	Exec 1
	Biodiversity Expansion	Science	TBD	TBD	TBD	In planning
	Bridging Projects - UBCO	UBCO Multi-Faculty	2021	80,000	\$25,000	Exec 1
	Centre for Interactive Research on Children's Learning Environments (CIRCLE)	Medicine/Applied Science	TBD	17,000	\$26,000	Exec 1
	Classroom Facility	Provost's Office	TBD	100,000	\$70,000	In planning
	Computer Science Expansion	Science	TBD	213,800	\$154,000	In planning
	Digital Learning Factory - UBCO	UBCO/Applied Science	2024	140,000	\$78,000	Exec 1
	Downtown Presence	VP External	TBD	35,000	\$7,000	Exec 2
	Forestry Expansion	Forestry	TBD	50,000	\$30,000	Exec 2
	Future Academic Building - UBCO	UBCO Multi-Faculty	2028	130,000	\$104,000	In planning
	Geography Building	Arts	TBD	90,000	\$50,000	In planning
	Innovation Hub (integrated with student housing at Copp site)	VP Research	TBD	73,873	\$45,000	Exec 2
	JB MacDonald Building Expansion (Dentistry)	Dentistry	TBD	95,000	\$65,000	Exec 2
	Learning Exchange	VP External	TBD	11,000	\$1,925	Exec 2
	Medicine One	Medicine	TBD	TBD	TBD	In planning
	Music Renewal + Expansion	Arts	TBD	74,475	\$81,000	Exec 1
	Sauder Graduate School Expansion	Sauder	TBD	142,000	\$105,000	Exec 2
	School of Public Policy & Global Affairs	Arts	TBD	45,000	\$30,000	In planning
	The Hive @ UBC Farm	Land + Food Systems	2023	62,054	\$33,000	Exec 3
	Technology Enterprise Facility 4 (TEF 4) - UBC Properties Trust		2022	TBD	TBD	Pending Board lease approval in Sep 2019
	Total Academic Projects			2,656,579	\$2,766,825	

Board-approved Five-Year Capital Plan projects shown in red. Plan submitted to AEST in June 2019.

STUDENT EXPERIENCE PROJECTS	Faculty /Dept	Target Completion	Gross Building Area (sf)	Preliminary Capital Cost (\$000s)	Current Status
Student Housing at Copp Site (with Innovation Hub) (500 beds)	SHHS/VPRI	TBD	TBD	\$76,000	Exec 1
Armoury Commons (1,000 beds)	SHHS/Arts	TBD	TBD	\$120,000	In planning
Totem Park East / Totem Field (700 beds)	SHHS	TBD	TBD	\$119,000	In planning
Potential In-Fill Sites at Place Vanier, Orchard Commons, Thunderbird and Ritsumeikan (bed count TBD)	SHHS	TBD	TBD	TBD	In planning
St. John's College Graduate Residence Expansion (100-150 beds)	St. John's College/SHHS	TBD	TBD	TBD	In planning
Integrated Student Health Centre	VP Students	TBD	30,000	\$18,000	Exec 1
Recreation Facility	Athletics & Recreation	TBD	115,000	\$55,000	Exec 2
War Memorial Gym Renewal	Athletics & Recreation	TBD	96,284	TBD	In planning
Thunderbird Stadium Redevelopment	Athletics & Recreation	TBD	57,500	\$50,000	Exec 1
Strength, Conditioning & Therapy Facility	Athletics & Recreation	TBD	20,000	\$12,000	In planning
Golf Training Facility	Athletics & Recreation	TBD	7,000	\$3,500	In planning
Indoor Track Facility	Athletics & Recreation	TBD	18,000	\$9,000	In planning
UBCO Gymnasium Expansion	UBCO Athletics	TBD	50,000	\$30,000	In planning
Total Student Experience Projects			393,784	\$492,500	

CAMPUS OPERATIONS PROJECTS	Faculty /Dept	Target Completion	Gross Building Area (sf)	Preliminary Capital Cost (\$000s)	Current Status
Administration Consolidation	Finance/HR/External Relations	TBD	TBD	TBD	In planning
Cogeneration Plant	Energy & Water Services	TBD	TBD	\$56,000	In planning
Diesel Fuel Storage Facility (Seismic Resilience Project)	Energy & Water Services	TBD	TBD	\$5,000	In planning
Total Campus Operations Projects			0	\$61,000	

SEISMIC PLAN PROJECTS	Faculty /Dept	Target Completion	Gross Building Area (sf)	Preliminary Capital Cost (\$000s) ¹	Current Status
Anthropology & Sociology Building	Arts	2027	35,327	\$31,000	In planning
Bookstore	VP Students	TBD	TBD	TBD	In planning
Chemistry Block A - Chemistry/Physics	Science	2029	84,012	\$0	In planning
Chemistry Block B - Chemistry East	Science	2032	57,834	\$0	In planning
Civil & Mechanical Engineering (CEME) Building	Applied Science	2031	103,538	\$138,000	In planning
Douglas Kenny Building (Psychology)	Arts	2034	103,473	\$155,000	In planning
Frank Forward Building	Applied Science	2025	85,433	\$0	In planning
H.R. MacMillan Building	Land + Food Systems	2034	149,037	\$204,000	In planning
Jack Bell Building (Social Work)	Arts	2032	30,871	\$20,000	In planning
J.B. MacDonald Building	Dentistry	2029	79,018	\$0	In planning
Leonard S. Klinck Building	IT/Science	2036	115,421	\$0	In planning
Lower Mall Research Station (LMRS)	Science/ApSci/Kin	2033	71,354	\$87,000	In planning
MacLeod Building	Applied Science	2023	79,061	\$0	In design (routine capital program)
Medical Block C	Science/Medicine	2029	43,239	\$59,000	In planning
Museum of Anthropology	Arts	2023	123,645	\$0	In design (routine capital program)
Music Building	Arts	2028	74,475	\$0	In planning
Robert Osborne Centre - Unit 1	Kinesiology	2037	54,874	\$51,000	In planning
Robert Osborne Centre - Unit 2	Kinesiology	2037	49,396	\$71,000	In planning
Woodward Library	Library	2025	83,711	\$51,000	In planning
Total Seismic Plan Projects			1,423,720	\$867,000	

Total Capital Priorities			4,474,083	\$4,187,325	
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