



FOR RECOMMENDATION

CONFIDENTIAL

IN CAMERA SESSION

TO: Academic Board

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DATE: November 7 for November 23, 2017

AGENDA ITEM: 18

ITEM IDENTIFICATION:

Capital Project: Science Building – Report of the Project Planning Committee, Project Scope, and Sources of Funding.

JURISDICTIONAL INFORMATION:

Section 5.6.2 of the Campus Affairs Committee Terms of Reference states that the Committee “considers reports of project planning committees and recommends to the UTM Campus Council approval in principle of projects (i.e. site, space plan, overall cost and sources of funds) with a capital cost as specified in the *Policy on Capital Planning and Capital Projects*.”

The *Policy on Capital Planning and Capital Projects* provides that capital projects exceeding \$20 million (Approval Level 3), at UTM will first be considered by the UTM Campus Affairs Committee and the UTM Campus Council, which shall recommend approval to Academic Board. The *Policy* further states that “If a project will require financing as part of the funding, the project proposal must be considered by the Business Board.” Following consideration and approval by the Academic Board, such proposals are then brought forward to the Executive Committee for endorsement and forwarding, before being considered by the Governing Council for approval.

Separate from the approval of the Project Planning Report, the *Policy* also requires that “Execution of such projects is approved by the Business Board.”

GOVERNANCE PATH:

A. Project Planning Report:

1. Campus Affairs Committee [For Recommendation] (October 31, 2017)
2. Campus Council [For Recommendation] (November 21, 2017)
3. **Academic Board [For Recommendation] (November 23, 2017)**
4. Business Board [For Recommendation*] (November 27, 2017)

5. Executive Committee [For Endorsement & Forwarding] (December 5, 2017)
6. Governing Council [For Approval] (December 14, 2017)

*Business Board recommends approval of the long-term borrowing component of the Project Planning Report proposal.

B. Execution of the Project:

1. Business Board [For Approval] (November 27, 2017)

PREVIOUS ACTION TAKEN:

None.

HIGHLIGHTS:

Detailed discussion of the background, space plan and site can be found in the “Report of the Project Planning Committee for the new Science Building at the University of Toronto Mississauga” dated September 21, 2017.

FINANCIAL IMPLICATIONS:

a) Total Project Cost Estimate

The estimated Total Project Cost is \$152.9 million, including “Construction Costs” of \$111,600,000 (2017 estimated costs plus inflation to 1Q 2019, the expected construction start). Those estimates are the result of two Class C estimates prepared by external consultants: the first in 2016, at the very earliest phase of planning; and a second in August 2017, based upon the detailed and refined Space Program contained in the approved Project Planning Report.

Extensive comparative analysis was done to confirm the appropriateness of the estimated construction costs. First, the detailed Space Programs and costs of previous, somewhat similar University of Toronto projects was reviewed: UTSC’s Environmental Science & Chemistry Building (ESC); the Engineering/Medicine laboratory project in the MaRS complex; and, the much earlier Centre for Cellular & Biomedical Research (CCBR) project on the St. George campus.

UTSC’s ESC Building is multi-purpose in its scope: it has undergraduate teaching facilities (approximately 23.3% of the total nasm); mixed (dry & wet) research space (at 36.4%); academic offices (at 27.7%); and non-academic functions. While it does have a similar total fume hood count, there are significant differences in the nature of that equipment (see fume hood comments on CCBR below).

The scope of the MaRS TEBL project revolved around medical research in wet laboratories but is not anywhere near as intense as the UTM project as it is more biology-based than chemistry-based, has only 12 fume hoods and was a fit-up of space in the already built MaRS complex.

The CCBR project is most similar but even that comparison has limitations, beyond the fact that CCBR was completed 12 years ago (2005) and the planning undertaken in 2003. The CCBR was designed to accommodate primarily cellular & biomolecular research in its 10 primary open

laboratories (4,777 nasm) with a planned maximum of 60 fume hoods. In comparison, the UTM project will house the Centre for Medicinal Chemistry (CMC), a very heavy, fume hood intensive chemistry research operation with its 13 primary research modules having no less than 64 fume cabinets (60 of those are large 8-foot units for synthetic chemistry housed in only 799 nasm of lab space). An additional 34 fume hoods will be in the other modular wet research laboratories. Therefore, the UTM project will have almost 100 fume hoods in less than half the lab space than CCBR holds its 60 units. That additional fume hood intensity and the fact that there have been significant developments in the nature of fume hood and laboratory design over the past 12 years diminishes the utility of the CCBR as a direct comparator. It should also be noted that the UTM project will be built to obtain LEED certification (Silver at least). In summary, the prior University of Toronto projects examined are not especially instructive in regard to costs.

As recently cited by University Planning, Design and Construction (UPDC), the 2016 Altus Group's published data on construction costs in the GTA for different types of buildings is an appropriate reference point for comparison purposes. That same publication for 2017 included an expected range for "Universities & Colleges – Laboratories (Level 1 and 2)" of between \$450 and \$650 per gross square foot of built space, construction costs only (fume hoods and other fixed equipment included).

When the estimated construction costs for the UTM project are normalized so that they are directly comparable to the ALTUS methodology (remove 1Q 2019 inflation provision), the resulting construction cost is \$632 per gross square foot. That is within the range to be expected for this kind of building in the GTA. UTM has a high degree of confidence in the estimated construction costs and in the estimated Total Project Costs for the new Science Building.

It should also be noted that UTM will follow the same approach successfully used in earlier, major capital projects: (i) the design process will be tightly managed to ensure that the building is "designed-to-budget"; and (ii) once construction begins, the project will also be "built-to-budget".

b) Operating Costs

Based upon current direct and indirect operating costs, the project is expected to increase UTM operating costs by \$2,134,430 per year, beginning in December, 2021. These estimates capture the incremental costs (including estimated inflation between 2017 and December, 2021) related to the new Science Building and include: utilities, caretaking/housekeeping, engineering, property management, grounds, Facilities Management & Planning, health & safety, stores, police, and information technology services.

Provision has been made within UTM's Five-year Operating Budget for these increased annual operating costs.

c) Funding Sources:

In summary, the funding sources for construction of the new UTM Science Building are:

UTM Capital Reserves:	\$ 97,952,551
Long-term borrowing:	\$ 30,000,000
Campaign (Donations/Fund Raising):	\$ 20,000,000
Provost Matching Funds:	<u>\$ 4,999,605</u>
TOTAL:	\$152,952,156

UTM believes in a conservative approach to financial planning and management. While there is a high level of confidence that the fundraising target of \$20,000,000 will be met, UTM understands that should fundraising beyond the already confirmed \$7,000,000 not be realized, Capital Reserves must be in place as backup to any shortfall. Further, since the timing of the additional \$13,000,000 in expected donations is unknown at this time, a detailed financial analysis has confirmed that UTM will be in a position to make up any such shortfall. Accordingly, those required accumulations of Capital Reserves, as shown in the Alternative Cash Flow set out below, have been incorporated into UTM’s multi-year financial plan (2017-18 to 2021-22). UTM’s track record of successfully meeting planned accumulation schedules for Capital Reserves related to previous major capital projects provides a high degree of confidence that the Capital Reserves will be available as needed. UTM is also confident that this commitment of Capital Reserves can be met with no negative impact on the timely achievement of its academic plans and aspirations as set out in UTM’s recently published Academic Plan.

Similarly, the cost of borrowing for this project has also been included in UTM's multi-year financial plan. UTM's current debt burden ratio is 2.1%. The additional borrowing requested for the Science Building (\$30m) will increase that ratio to 2.5%, still well below the maximum allowed by the University of Toronto Debt Strategy Policy issued December 13, 2012 (5%).

UTM Science Building: Alternative Projected Cash Flow¹

Fiscal	Reserves	Donations^{3,5}	Provost Matching Funds³	Borrowing⁴	Project Cash Burn²	Cumulative Surplus (Shortfall)
2017-18 (In-hand)	\$28.223				(\$2.127)	\$26.093
2018-19	14.487				(7.639)	32.944
2019-20	26.742	2.300	2.300		(22.547)	41.739
2020-21	20.500	2.300	2.300		(72.687)	(5.848)⁴
2021-22	21.000	2.400	0.400	30.000	(47.952)	-
Total:	\$110.952	\$7.000	\$5.000	\$30.000	\$152.952	-

NOTES:

- 1) “Alternative” cash flow in unlikely event that additional \$13m in donations (beyond confirmed \$7m) does not materialize.
- 2) Prepared by Project Development and based on estimates provided by external cost consultant (Turner & Townsend).
- 3) Confirmed donations/matching will flow at start of construction, (November, 2019).
- 4) Shortfall will be charged T-bill rate plus 25 basis points when in deficit; more than likely to be offset by interest earned while in surplus at T-bill rate. Long term Borrowing (\$30.0m) would be issued at substantial completion (November, 2021).
- 5) Actual total fundraising target is \$20m.

RECOMMENDATION:

Be It Recommended:

1. THAT the project scope of the UTM Science Building, totaling 7,134 net assignable square metres (15,552 gross square metres) to be located on Development Site 1 as detailed in the 2011 UTM Campus Master Plan, be approved in principle, expected to be funded from a combination of the following sources:

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Long-term borrowing:	\$ 30,000,000
Campaign (Donations/Fund Raising):	\$ 20,000,000
Provost Matching Funds:	<u>\$ 4,999,605</u>
TOTAL:	\$152,952,156

DOCUMENTATION PROVIDED:

Report of the Project Planning Committee for a New Science Building at the University of Toronto Mississauga (September 21, 2017)