



FOR RECOMMENDATION

PUBLIC

OPEN SESSION

TO: Executive Committee

SPONSOR: Prof. Scott Mabury, Vice-President, University Operations

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PRESENTER: See sponsor

CONTACT INFO:

DATE: October 5, 2015 for October 21, 2015

AGENDA ITEM: 3 (c.)

ITEM IDENTIFICATION: Capital Project: The Renovation and Expansion of the Recreation Wing (R-Wing) at the University of Toronto Scarborough – the new *Highland Hall*-

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 UTSC 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*.”

Under the Policy on Capital Planning and Capital Projects, “...Proposals for capital projects exceeding \$10 million must be considered by the appropriate Boards and Committees of Governing Council on the joint recommendation of the Vice President and Provost and the Vice President, University Operations. The Planning and Budget Committee will consider projects at the St. George campus and the respective Campus Affairs Committees and Campus Councils will consider projects at University of Toronto Mississauga and University of Toronto Scarborough and recommend them to the Academic Board for consideration. Normally, they will require approval of the Governing Council. Execution of such projects is approved by the Business Board.”

GOVERNANCE PATH:

Project Planning Report: Project Scope, Total Project Cost, and Sources of Funding

1. UTSC Campus Affairs Committee [for recommendation] (September 16, 2015)
2. UTSC Campus Council [for recommendation] (September 17, 2015)
3. Business Board [for financing] (September 21, 2015)
4. Academic Board [for recommendation] (October 1, 2015)
- 5. Executive Committee[for endorsing and forwarding] (October 21, 2015)**
6. Governing Council [for approval] (October 29, 2015)

PREVIOUS ACTION TAKEN:

The Capital project: The Renovation and Expansion of the Recreation Wing (R-Wing) at the University of Toronto Scarborough-the new Highland Hall-Project Scope and Sources of Funding was approved in principle by the Governing Council on April 1, 2015, contingent on award of the Ontario Major Capacity Expansion Program.

HIGHLIGHTS:

The Project Planning Report dated November 2014 has been submitted for information. For clarity, there are no changes in the size, function or location of the project. There are no changes in the total project costs. There are no changes to the annual operating costs. The only changes are (i) sources of funding (ii) governance schedule (iii) construction schedule. Part of the anticipated funding for the project was through the Province’s Major Capacity Expansion Program. However, this funding was not awarded to UTSC. UTSC has now identified other funding sources to allow this project to proceed and to address the additional space needed on the campus to keep pace with undergraduate growth.

In order to meet the August 2017 occupancy date, a special UTSC Campus Council meeting has been called to discuss the “Highland Hall’ project so that it can be brought through governance in cycle 1. This allows for the project schedule to achieve an occupancy date of August 2017. The construction date moves from the previously anticipated start of August 2015 to a construction start of December 2015.

The chart below outlines the revised projected key scheduling dates for governance and construction.

Current Construction Schedule	
Tender Award	December 2015
Substantial Completion	Anticipated August, 2017
Previous Construction Schedule	
Tender Award	August 2015
Substantial Completion	Anticipated July 2017

Governance Cycle 1	Dates
UTSC Campus Affairs Committee	September 16
UTSC Campus Council (Special Meeting)	September 17
Business Board	September 21
Academic Board	October 1
Executive Committee	October 21
Governing Council	October 29

FINANCIAL IMPLICATIONS:

Discussion of overall costs and sources of funds can be found in the *in camera* document for this project. Previously, the project was to be funded by UTSC operating funds, Capital Campaign, Provost Central Funds and the Province's Capital Expansion Program. Sources of funding will now be a greater portion of UTSC operating funds and long term borrowing, (to cover the shortfall resulting from the lack of success in Capital Expansion Program). The amounts for the capital campaign and the Provost Central Funds remain unchanged.

RECOMMENDATIONS:

Be It Resolved:

THAT the following recommendation be endorsed and forwarded to the Governing Council:

THAT the capital project as described in the Project Planning Committee Report for the Renovation and Expansion of the Recreation Wing (R-Wing) at the University of Toronto Scarborough dated, November 20, 2014; with a project scope of 4,237 net assignable square metres (nasm) (8,178 gross square metres (gsm)) of new construction and 2,223 nasm (4,291 gsm) of renovation; approved in principle by the Governing Council on April 1, 2015, be amended to reflect the following revised sources of funding: the UTSC Operating Funds; the Capital Campaign; the Provost Central Funds; and Financing (with any shortfall of funds from the Capital Campaign and the accompanying match from the Provost Central Funds to be met by additional UTSC Operating Funds and not drawn upon from further financing); and that this be approved.

DOCUMENTATION PROVIDED:

- Report of the Project Planning Committee for the Renovation and Expansion of the Recreation Wing (R-Wing) at the University of Toronto Scarborough dated November 20, 2014 is attached for information.

November 20, 2014

**Report of the Project Planning Committee
Recreation Wing (R-Wing) Renovation and Expansion
“Highland Hall”
University of Toronto Scarborough**

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I. Executive Summary

Since 2000, UTSC has experienced an unprecedented surge in enrolment that has transformed and expanded the campus to over 11,930 students. UTSC's growth targets would see an additional 2,099 new undergraduate students join the campus over the next five years. UTSC is also planning to double the number of graduate students conducting the majority of their research here.

In 2012, Scarborough Campus Students' Union voted in favour of a financial levy to support the construction of a new athletic facility, known as the Toronto Pan Am Sports Centre (TPASC), at Morningside and Military Trail intersection, at the northern extent of the UTSC campus. The Centre is now complete, and in July 2014, the existing Athletic functions moved over to the new facility, leaving the existing building vacated and ready for renovation. The ability to renovate and construct new space at the R-Wing will relieve severe space pressures on the South Campus.

A Project Planning Committee was struck in 2013 to examine the renovation of the existing Recreation Wing upon the relocation of its activities to TPASC. A draft report was completed in January 2014, which was presented to CaPS Executive Committee at the January 23, 2014 meeting. The report detailed a phased approach to the project, primarily for cost reasons. The renovation and re-cladding of the gymnasium was planned for a later phase, and costed separately.

It was noted at the CaPS Executive meeting that proceeding with a schematic design phase may lead to a more refined costing, given the complexities of the project. The Committee approved funding for consultants to be engaged in order to have a tender prepared in September, with submission of the Project Planning Report to the governance cycle delayed until fall 2014.

A RFP process was initiated in March 2014, followed by interviews with six short-listed architectural firms. Perkins + Will were awarded the project at the end of May 2014. Over the summer, Perkins + Will led an intensive schematic design process, with weekly meetings with UTSC staff, faculty and project management. The design has been reviewed twice by the University's Design Review Committee and has been well-received by the UTSC user groups. The costing has been refined through new estimates, with input and analysis from Project Development.

Situated between the Student Centre and new East Arrival Court, the R-Wing - re-named Highland Hall - will re-populate a neglected corner of the campus and create a new point of arrivals and departures. The existing building will be re-clad in a variety of modern materials, with new openings to encourage connection and access along a main artery for the south campus. Surrounded by exterior pathways, the building will encourage and improve pedestrian travel on all sides, while facilitating connections between Military Trail, the East Arrival Court and the rest of campus.

A Project Planning Committee was struck in 2013, and met through the summer and fall of that year. Undergraduate and graduate students were represented on the Committee. Through various planning exercises, it was determined that the Social Science departments were excellent candidates for relocation to the new mid-rise office structure. For the past three years, the Social Science departments have been housed in the MW building, a building that was purpose built for the department of Management. Since moving in the MW building as a single department, Social Science has departmentalized in five separate departments, with further possible departmentalization. This current location does not allow for expansion. Additional space for teaching and research labs is also needed.

The project will construct a mid-rise academic office structure - which will include Student Services, the Registrar and recruitment area on the ground floor, and will renovate the existing interior spaces to house a lecture theatre, two classrooms, the Learning Commons, the Hub, student study space and an Exam Centre (previously the gymnasium). The existing building will be re-clad, the entrance from the transit loop will be enhanced, along with other exterior areas, including landscape and walkways. A portion of the existing basement will be shelled, with potential future use as library storage. The costs for all elements of the project, are included in the Total Project Cost in Appendix 5.

The conversion of this facility will add approximately 4,237 new NASMs (8,178 GSM) through the construction of an office mid-rise structure and renovate approximately 2,223 NASMs (4,291 GSM) in the existing R-Wing, for a total of 6,461 NASMs or 12,469 GSM. The project completion date is expected in 2016/17. An additional 500 NASMs (950 GSM) in the existing R-Wing basement will be left as shell space at this time, to be renovated in the future.

The total annual costs for this facility are estimated at \$945,000, related to utilities, building and maintenance costs. The funding sources for the project are UTSC Operating Funds, Capital Campaign, Provost Central Funds, and award of the Ontario Major Capacity Expansion Program (as cash).

II. Project Background

a) Membership

Andrew Arifuzzaman, Chief Administrative Officer, UTSC (Co-Chair)
Andre Sorensen, Chair Dept. of Human Geography, UTSC (Co-Chair)
Malcolm Campbell, VP Research, UTSC
Michael Lambek, Chair, Anthropology
Larry Sawchuk, Dept. of Anthropology
Patricia Landolt, Chair, Sociology
Grace Skogstad, Chair, Political Science, UTSC
Paul Kingston, Director, CCDS, UTSC
Clare Hasenkampf, Director, Centre for Teaching and Learning, UTSC
Janice Patterson, Acting Director, Centre for Teaching and Learning
Curtis Cole, Registrar and Director of Enrolment Management, Registrar's Office, UTSC
Geoff Gibson, Graduate Student Representative, UTSC
Merlandy Joseph, Undergraduate Student Representative, UTSC
Desmond Pouyat, Dean of Student Affairs, UTSC
Jeevan Kempson, Assistant Chief Administrative Officer, UTSC
Therese Ludlow, Operations Manager, UTSC
Jim Derenzis, Director Facilities Management, UTSC
Jeff Miller, Mechanical Engineer, Facilities Management, UTSC
Deepal Patel, Engineering Coordinator, UTSC
Hovan Stepanian, Project Manager, Facilities Management, UTSC
Ryan D'Souza, Project Manager (DCM) Facilities Management, UTSC
Ryan Tomlinson, Project Coordinator, Facilities Management, UTSC
George Phelps, Director, Project Development, U of T
Michael Somers, Project Manager, University Planning, Design and Construction, U of T
Christine Burke, Director, Campus & Facilities Planning, U of T
Lisa Neidrauer, Senior Planner, Campus & Facilities Planning, U of T

b) Terms of Reference

1. Make recommendations for a detailed space program and functional layout for the Renovation of the R-Wing Building at the University of Toronto Scarborough.
2. Identify the space program as it is related to the existing and approved academic plan at UTSC, taking into account the impact of approved and proposed program that are reflected in increasing faculty, student and staff complement. Plan to realize maximum flexibility of space to permit future allocation, as program needs change.
3. Demonstrate that the proposed space program will be consistent with the Council of Ontario Universities' and the University's own space standards.
4. Identify all deferred maintenance and items of infrastructure renewal for the buildings that are to be renovated.
5. Identify all co-effects, including space reallocations from the existing site, impact on the delivery of academic programs during construction and the possible relocation as required to implement the plan of existing units.

6. Address campus-wide planning directives as set out in the campus master plan, open space plan, urban design criteria, and site conditions that respond to the broader University community.
7. Identify equipment and moveable furnishings necessary to the project and their estimated cost.
8. Identify all data, networking and communication requirements and their related costs.
9. Identify all security, occupational health and safety and accessibility requirements and their related costs.
10. Identify all costs associated with transition during construction and secondary effects resulting from the realization of this project.
11. Determine a total project cost estimate (TPC) for the capital project including costs of implementation in phases if required, and also identify all resource costs to the University.
12. Identify all sources of funding for capital and operating costs.
13. Complete report by November 17, 2014.

c) Background Information

As the student population continues to expand to meet system demands, the University of Toronto Scarborough (UTSC) requires additional facilities to accommodate both students and faculty. Since 2000, UTSC has experienced an unprecedented surge in enrolment that has transformed and expanded the campus to over 11,930 undergraduate and graduate students. UTSC's growth targets would see an additional 2,099 new undergraduate students join the campus by 2018-19. UTSC is also planning to increase the number of graduate students conducting the majority of their research at UTSC by over 50%.

UTSC plans to grow by:

- building on existing strengths in research and scholarship;
- maintaining its focus on enriching experiential learning opportunities;
- developing highly relevant academic programs at the undergraduate and graduate level.

A series of projects will be undertaken over the near and medium terms that will address both core academic activities as well as campus infrastructure requirements. These projects would occur within the next five years to include both renovations and new infrastructure. Together these academic buildings and campus support facilities will create a quality University of Toronto campus experience. The following projects are in the planning phase that spans from 2013 to 2018:

- Environmental Science & Chemistry Building
- Recreation Wing (R-Wing) Renovation-re-named Highland Hall
- Science Wing Renovations
- New Parking Structure
- New Student Residence
- Pedestrian Bridge connecting North and South campus
- Hotel and Conference Centre
- Deferred Maintenance

From this list of projects, the construction phase of the Environmental Science and Chemistry Building is currently underway. This facility will become the scientific anchor for the North Campus development and will be home to the department of Physical and Environmental Sciences (DPES). The building is set to be complete in July 2015. With this project now underway, the focus is now on renovating the Recreation wing which will relieve severe space pressures on the South Campus.

The Recreation Wing at UTSC, known as the 'R-Wing' was constructed in 1972 to provide much-needed athletic space for UTSC students. The building currently contains 5,016 NASMs or 7,175 GSM. Its primary function was an athletic facility with a gymnasium, exercise and activity studios, squash courts and change rooms, and administrative offices.

The building forms part of the streetscape that faces Military Trail, and despite its prominence, the R-Wing has not served well as a public face to the campus. Constructed out of cast-in-place concrete, with few openings or articulation, the R-Wing is overdue for an exterior overhaul, as well as interior renovation. With the completion of the East Arrival Court in 2012, and the rampway to the Student Centre/Bladen Wing in 2013, student traffic has increased on all sides of the building. The R-Wing has the potential to become an important urban design component of the south campus, knitting these various passages together.

In 2012, Scarborough Campus Students' Union voted in favour of a financial levy to support the construction of a new athletic facility, known as the Toronto Pan Am Sports Centre, at Morningside and Military Trail intersection, at the northern extent of the UTSC campus. When the Centre was completed in July 2014, existing Athletic functions moved over to the new facility, leaving the existing building vacated and ready for renovation. The ability to renovate and construct new space at the R-Wing will relieve severe space pressures on the South Campus.

For the past three years, the Social Science departments have been housed in the MW building, after the prior occupant, the Department of Management, relocated to the new Instructional Centre. At the time, the MW building had enough space to accommodate the Social Sciences departments, but did not have room to accommodate growth. The MW building was purpose built for the Department of Management, which functions very differently from the Social Science departments. Since moving into the MW building as a single department, Social Science has departmentalized, into five separate departments, with the possibility of further departmentalization. There is also insufficient office space since the building currently has 64 offices for faculty and staff while the Social Sciences departments require almost 100 offices.

There is no additional space anywhere in the MW building for increasing the size of the Anthropology teaching lab, adding new research labs, and group work space, or providing adequate office space for graduate students, post-doctoral fellows or visiting fellows. For these reasons, the Social Sciences are excellent candidates for relocation to an expansion space, namely the new mid-rise tower of the renovated R-Wing.

The Social Sciences have also increased overall growth in teaching, as shown in the table below which summarizes Social Sciences undergraduate full course equivalent enrolments over the past several years.

Table 1. Social Sciences Fall FCE (Full Course Equivalent) Enrolments by Department

	2010	2011	2012	2013
Anthropology	1,298	1,418	1,552	1,422
Critical Development Studies	319	307	256	267
Human Geography	642	539	583	649
Political Science	883	827	779	932
Sociology	1,015	967	976	991
Total	4,156	4,057	4,145	4,260

A number of other Academic Support Services will also be located in the newly renovated building, such as the Office of the Registrar and Recruitment, an exam centre, one large lecture theatre, two smaller 42 seat classrooms and a Learning Commons/student study area.

The office of the registrar has outgrown its current space in the Arts & Administration Building, and cannot accommodate the growing number of students who need to access the office. Long lines, stretching the length of the building are a normal condition at present. UTSC needs to take advantage whenever possible to add to the classroom and study space inventory as student growth needs to be accompanied by growth in teaching and study spaces. The R-Wing renovation offers an excellent opportunity for academic support spaces to keep pace with our growing numbers of students.

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The conversion of this facility will add approximately 4,237 new NASMs (8,178 GSM) through the construction of an office mid-rise structure and renovate approximately 2,223 NASMs (4,291GSM) the existing R-Wing, for a total of 6,461 NASMs or 12,469 GSM. The project completion date is expected to be in late 2016-early 2017. An additional 500 NASMs (950 GSM) in the existing R-Wing basement will be renovated at another date that will be left as shell space at this time.

d) Statement of Academic Plan – Social Science Departments

The University of Toronto Scarborough experienced tremendous growth in student enrolment in the early years of this century as a result of the double cohort, and has continued to grow at a more gradual but steady pace in the ensuing years. This growth has placed tremendous strain on the campus faculty, staff, and available infrastructure. The Social Science departments were among those departments that took on a disproportionate number of these additional students. In the last few years, we have been able to address much of our infrastructure needs, including significant augmentation of our faculty and administrative staff complement. Another significant step forward was the departmentalization of the Department of Social Sciences into five independent academic units – the Departments of Anthropology, Human Geography, Political Science, and Sociology; and the Centre for Critical Development Studies (CCDS). The move to smaller focused departments based on greater disciplinary coherence was consistent with the trend on the UTSC campus more generally.

Departmentalization has provided colleagues with greater autonomy and accountability. It also has promoted group cohesion and faculty morale at the most relevant level of academic community, which is proving to be a boon for research connections, curriculum renewal, and the student experience. Having coherent disciplinary departments that are all relatively small and agile promotes innovation in a way that eluded the omnibus departments. Departments have greater flexibility when reviewing, improving, and augmenting their programs and curricula. As well, the departments have found new opportunities to design and pursue their own academic and intellectual visions for the future, tailoring their programs and other academic initiatives to better fit the research and teaching strengths of the disciplinary members. Notwithstanding their new autonomy, the Social Science departments remain closely interconnected; intellectually, many of their programs and research activities involve faculty across the departments, and administratively, they share an excellent cadre of administrative staff. A Social Science building that houses all five academic units will not only provide an external profile for Social Sciences at UTSC, but more importantly also will provide an environment that supports the development of unique scholarly life for each department while at the same time facilitating a vibrant interconnectedness.

The Department of Anthropology offers programs in two of the core fields of the discipline: Sociocultural Anthropology (BA degree) and Evolutionary Anthropology (BSc degree). The program in sociocultural anthropology examines the range of human ways of life across the globe as well as the forces and consequences of rapid social change in the present. The program in evolutionary anthropology charts the biological emergence of the human species and its relation to non-human primates and other species. It also examines how human bodies have adapted to different environments and the ways in which social and biological factors intersect in the prevalence of diseases and in rates of reproduction and death. The Department of Anthropology also is home to two Health Studies programs. The first program focuses on population health and leads to a B.Sc. It examines how biological and genetic factors determine health, as well as how environmental factors directly and indirectly influence the well-being of individuals from a micro-level (household) perspective to a macro-level (global) perspective. The second program focuses on health policy and leads to a B.A. degree. It provides an appreciation for how cultural factors (e.g., tradition, customs, ritual) can mediate human behavior and thus impact health outcomes, Canadian health care policy

and its relation to other governmental models, and how social, economic, and political structures shape existing policies for current and future health care needs.

The Centre for Critical Developmental Studies provides a scholarly critique of international development efforts while preparing students to be critical members of the profession. The CCDS is particularly interested in examining the difficult nexus between development practice and development research. The flagship undergraduate program within the CCDS is the International Development Studies (IDS) co-op program. The program is interdisciplinary by design, combining core international development courses in the social sciences and sciences with a variety of professional skill development courses in such areas as project management, research design and methodology, researcher-practitioner engagement, and ethics and development.

The Department of Human Geography offers programs in Human Geography and City Studies. As a social science, Human Geography is concerned with the spatial patterns and impacts of human activity and the character of regions and places. Human Geography is well placed to explore the complex relationships between society and the natural environment as well as the social and economic problems of human land use and settlement. City Studies is a multidisciplinary program that introduces students to concepts and skills to understand and tackle problems of an increasingly urban world. The Department also recently put forth a minor program in Geographic Information Science (GIS). The goal of this program is to provide training in the theory and practice of geographic information science for spatial analysis, spatial data management, and cartographic representation. Programs such as GIS are becoming increasingly widespread (and of critical importance) in Geography and City Planning programs, and can fruitfully be combined with programs in Critical Development Studies, Sociology, Anthropology, Environmental Studies, and Environmental Science.

The Department of Political Science offers programs in Political Science and Public Policy. The programs give students the knowledge and tools they need to understand the critical political issues that affect all our lives, whether it is globalization, corruption and violence, international conflict and cooperation, democracy and authoritarianism, ethnic and religious conflicts, ancient and modern philosophy, or domestic or global public policy.

The Department of Sociology offers programs in Sociology that explore every element of our complex social world, from race and gender relations to love and divorce, from access to good jobs and the right to citizenship to crime and deviance, from the politics of climate change and natural disasters to globalization and transnationalism and more. Students are challenged to look outside themselves, and are given the tools they need to better understand their world and the forces that shape their lives so they can address a host of social issues critically and constructively.

The Social Science departments currently teach more than 8,300 students and have close to 3,200 students enrolled in their programs.

Undergraduate Enrolment Growth

UTSC's 2013-14 undergraduate enrolment is 11,701 headcount students, or 9,680 fall/winter FTEs. The current plan is for a 19% increase in undergraduate fall/winter FTE enrolment by 2018-19 over 2013-14 levels to 11,539 FTEs. These enrolment projections are summarized below in Figure 1.

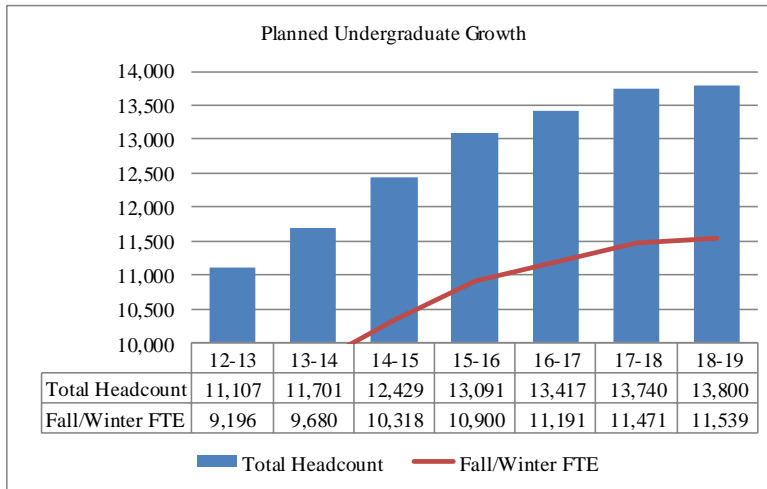


Figure 1: Planned Undergraduate Growth

Total undergraduate 3-term FTEs

	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>	<u>2016-17</u>	<u>2017-18</u>	<u>2018-19</u>
Total 3-Term FTE	10,521	11,047	11,822	12,497	12,871	13,190	13,303

Graduate Student Growth

In 2013-14, there were 229 resident graduate students or 216.4 FTEs in UTSC administered and St. George administered programs. By 2018-19, these numbers are planned to grow to 387 students or 393.9 FTEs. This represents a 73% growth in FTE graduate enrolment. These graduate enrolment projections are summarized in Figure 2 below.

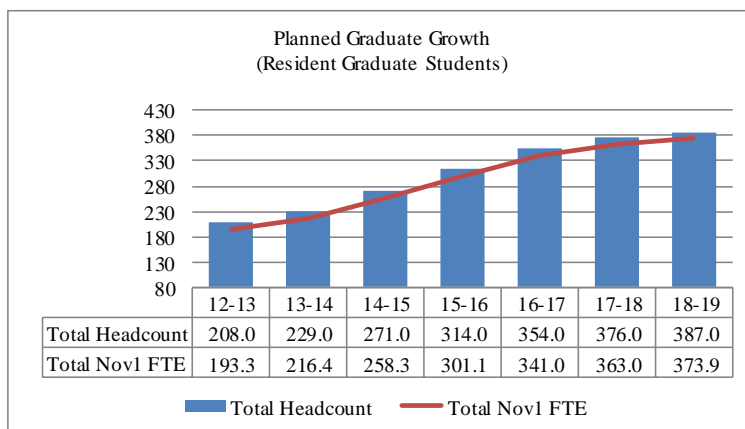


Figure 2: Planned Graduate Growth

e) **Space Requirements**

Existing Space

Table 2. R-Wing NASM, Before and After Renovation by COU Space Category

	R-Wing Before Renovation Total NASM	R-Wing Space Plan Draft (pre-Architect) Total NASM	R-Wing Space Plan Actual (User group with P +W Consultations) Total NASM
Classrooms		619	628
Teaching Labs		137	143
Research Labs		125	128
Academic Dept Space		1,969	1,990
Athletic Activity Areas	3,242	-	-
Athletic Service Space	1,055	-	-
Central Admin Office Support + Central Administrative Offices (incl. International Centre)	264	882	884
Food Facilities Services (incl. Express Outlet)	96	40	41
General Lounge Space	255	-	-
Commons + Study Space + Hub + CTL	-	850	863
Student Services (incl. Gymnasium)	-	1,602	1,450
Other Space (incl. Plant Maint; Std. Off & support space; DSA NASM; but excl. SCAA & food serv) - Now incorporated into Space Plan	106	372	334
Total R-Wing NASM	5,017	6,596	6,461

Below is a summary of the departments that will go into Highland Hall (renovated R-Wing + new)

Table 3. Space Program for Occupants of Renovated R-Wing (Dept Spaces : Current and New Build)

	# of Rooms	Total NASM	Existing NASM
Anthropology	21	410	470
Health Studies	10	123	incl. with ANT
Sociology	13	160	234
Human Geography	19	305	219
Political Science	19	232	229
CCDS	10	141	155
Social Sciences Admin	10	121	incl. above
Academic departments support spaces	43	768	incl. above
Subtotal:	145	2,261	
International Student Centre	8	104	62
Registrar (entire dept)	46	780	582
Gymnasium - exam and events	1	1,450	1602
Classrooms	2	628	new addition
CTL Facilitated Study Group	1	109	18
UTSC Commons - Help Centre	1	20	new addition
UTSC Commons - study / lounge space		570	new addition
The HUB (student experiential learning centre)	5	164	265
Express beverage outlet	1	41	new addition
Departmental Student Association Offices	6	72	
Other Space (previously incl. food serv, plant maint, SCAA) - Now incorporated into Space Plan		262	
Total NASM, New and Renovated Space	216	6,461	3,570

Occupant Profile

A profile of departments to occupy Highland Hall is shown in the table below:

Table 4. Profile of candidates to occupy Highland Hall (former R-Wing)

	Academic			Non-Academic		
	Budgeted 2013-14 FTEs	Planned FTE Growth	Total Planned FTE After Growth	Budgeted 2013-14 FTEs	Planned FTE Growth	Total Planned FTE After Growth
Academic Departments:						
Anthropology	15.2	2.0	17.2			
Health Studies	5.0	4.5	9.5			
Sociology	12.0	1.0	13.0			
Human Geography	15.5	2.0	17.5			
Political Science	16.8	2.0	18.8			
Critical Development Studies	4.4	2.0	6.4			
Admin staff				8.0	2.0	10.0
Non-Academic Departments:						
Registrar (incl GreenPath)				36.6	14.4	51.0
International Student Centre				5.0	2.0	7.0
The HUB				0.6	0.0	0.6
Total	68.8	13.5	82.3	50.2	18.4	68.6

- Academic departments
Anthropology, Health Studies, Sociology, Human Geography, Political Science, and CCDS - The Social Sciences Building currently occupies 1,307 NASMs in the MW Building, and is unable to accommodate current space needs or future growth. The Occupant Profile in the Table 4 shows planned complement growth in the Social Sciences of 13.5 FTE in the coming years.
- Non-academic departments
Registrar and Recruitment – The Office of the Registrar currently occupies 582 NASMs in the Arts & Administration Building. The office is struggling with lack of space and long student line-ups. The Registrar is expected to grow by 14.4 FTE in the coming years.

UTSC Commons-The UTSC Commons is conceived as a multi-use space that will include study space, lounge space, a CTL teaching lab, The Hub, and an express beverage outlet.

The International Student Centre

Space Benchmarks

Using the COU (Council of Ontario Universities) space guidelines for UTSC, in 2010-11, the campus was at 79% of the generated amount of space but by 2013-14 had slipped down to 71% of the guidelines. With the addition of the ESCB building and our prorated share of the PanAm Sports Centre, UTSC’s space index is projected to rise to 85% by 2015-16 but then projected to decline to 75% by 2018-19. The reason for the decline is that there is no significant planned growth in new infrastructure beyond 2015-16 while students, faculty and staff complement will continue to increase beyond 2015-16. This will increase space pressures. These data are summarized in Figure 5.

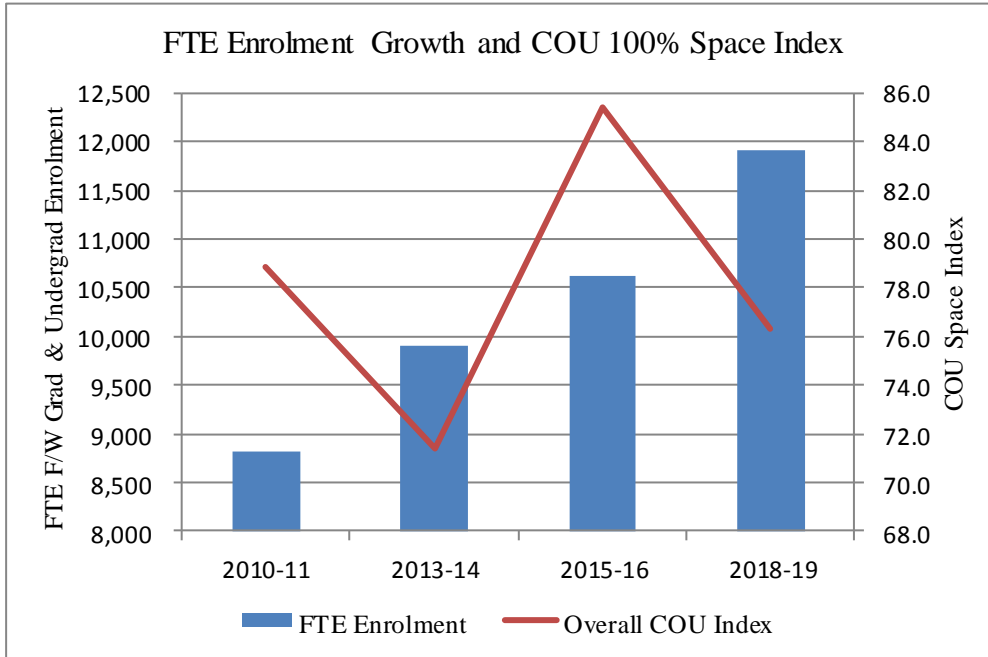


Figure 3. FTE Enrolment Growth and COU Space Index

The planned R-Wing and S-Wing renovations will alleviate space pressures for classroom and study space over 2013-14 levels but the COU index for these space categories is projected to decline from 2015-16 to 2018-19.

	COU Index Classroom Space	COU Index Study Space
2013-14	60.0	60.9
2015-16	69.2	71.5
2018-19	61.7	63.7

UTSC is planning to add 628 classroom NASMs within the R-Wing renovation and 1,073 classroom NASMs within the DPES vacated space in the S-Wing in order to accommodate the planned 19% increase in undergraduate students over 2013-14. The addition of 570 NASMs for study space will help to alleviate the pressure for study space by approximately 2,099 additional undergraduate students over the five year plan.

Summary of Space requirements

The summary space program, incorporating both new construction and renovated areas is as follows:

Highland Hall Estimated Overall Renovated and New Space (nasms)

<u>Type of Room</u>	<u>NASM</u>
Classrooms	
236 seat	402
2 X 42 seat	226
Subtotal: Classrooms	628
Academic and admin departments + Support Spaces	3,407
Exam Centre, events	1,450
The HUB	164
Learning Commons, CTL, Student Study Space	699
Express beverage outlet	41
Departmental Student Association Offices	72
Total New and Renovated Space	6,461

The table below shows total space by COU category and COU space generated index, for current space, estimated space by 2015-16 after the ESCB building, UTSC pro-rated share of the Toronto PanAm Sports Centre, and R and S Wing renovations, and space by 2018-19.

Overall Campus Space, Before and After Renovation and Growth

	2013-14		2015-16		2018-19	
	(Incl IC) Total NASM	COU Index	(Incl ESCB, R,S Wings & PanAm) Total NASM	COU Index	No Further Growth in Total NASM	COU Index
Classrooms	7,300	60%	9,034	69%	9,034	62%
Teaching Labs	4,828	86%	5,300	89%	5,300	80%
Research Labs	6,684	75%	8,949	78%	8,949	66%
Academic Dept Space	9,805	99%	13,245	122%	13,245	109%
Central Admin Space	4,912	82%	5,341	85%	5,341	80%
Library and Study Space	5,928	62%	6,868	68%	6,868	62%
Subtotal, Academic & Support Space	39,458	76%	48,738	84%	48,738	75%
Recreation & Athletics	4,398	49%	10,389	109%	10,389	97%
Student & Central Services	11,092	70%	13,089	76%	13,089	68%
Subtotal, Other Space	15,491	62%	23,477	88%	23,477	78%
UTSC Total Assignable Space	54,948	71%	72,215	85%	72,215	76%

Notes:

1. Portables (870 existing nasms plus 253 new nasms for Jan. 2014 new Social Sciences portables) will be dismantled in 2016.
2. ESCB building (completion 2015): space program is based on 5,058 nasms.
3. UTSC share of PanAm Sports Centre is 50% of the 20,777 nasms facility.
4. Central Admin includes office and support space for all departments outside of academic units, IITS, and Student Affairs.
5. Student and Central Services include Student Affairs, student societies & offices, common and assembly space, IITS, food services, and Physical Plant.

III. Project Description

a) Vision Statement

Highland Hall will become an important academic and administrative anchor for the South Campus. Incorporating a full renovation of the existing R-Wing and a new addition above it, the facility will house lecture theatres, student event space, study space, student services and faculty offices.

Situated between the Student Centre and new East Arrival Court, the building will re-populate a neglected corner of the campus and create a new point of arrivals and departures. A portion of the existing building will be re-clad in a variety of modern materials, with new openings to encourage connection and access along a main artery for the south campus. Surrounded by exterior pathways, the building will encourage and improve pedestrian travel on all sides, while facilitating connections between Military Trail, the East Arrival Court and the rest of campus.

The distinct spaces associated with the academic home of the Social Science departments are planned for the upper levels, while teaching, assembly and study spaces will occupy the floors at or near ground level. Faculty spaces should allow interaction between colleagues and their students in 1:1 and small group settings. One lecture theatre and two smaller classrooms will provide much needed classroom space, while a variety of student study spaces will allow for both private and group study. Renovation of the existing gymnasium will result in a flexible space accommodating both exams and student events. The student and visitor-focused spaces (Registrar and Recruitment, Commons) must put a premium on providing an easily navigable, flow through space that is comfortable and attractive and conducive to interpersonal interactions. Ample gathering space and crush space should be provided to ensure the building's interior becomes an open, inviting addition to the UTSC south campus.

Our goals are to create a building with comfortable, inviting, and sufficient space for the various departments in the social sciences to engage in their academic activities of conducting research, writing, preparing lectures, consulting with students and with one another, and holding seminars. These spaces should be set up with full technological support; sufficient light, air, privacy, and noise insulation; and adequate common rooms for social interaction and discussion among faculty and between faculty and students. There must be private offices for each faculty member, sufficient room for growth, and adequate office space for sessional instructors, TAs, graduate students, postdoctoral fellows, and visiting researchers.

b) Space Program and Functional Plan

Space Program

Division Index	Department	Space Description	Number of Spaces	Subtotal Net Area (nasms)
1.1	Health Studies			123.15
1.1	Health Studies	Faculty Office	10	123.15
1.2	Anthropology			409.54
1.2	Anthropology	Chair Office	1	16.22
1.2	Anthropology	Faculty Office	17	206.08
1.2	Anthropology	Ethnography Research Lab	1	44.28
1.2	Anthropology	Undergraduate Teaching Lab	1	128.46
1.2	Anthropology	Undergraduate Teaching Lab Storage	1	14.50
1.3	Sociology			160.42
1.3	Sociology	Chair Office	1	16.38
1.3	Sociology	Faculty Office	12	144.04
2.0	Human Geography			305.22
2.0	Human Geography	Chair Office	1	16.11
2.0	Human Geography	Faculty Office	17	204.98

2.0	Human Geography	GIS (Dry Computer Lab)	1	84.13
2.1	Political Science			232.33
2.1	Political Science	Chair Office	1	16.38
2.1	Political Science	Faculty Office	18	215.95
2.2	Centre for Critical Development Studies			141.10
2.2	Centre for Critical Development Studies	Faculty Office	7	85.84
2.2	Centre for Critical Development Studies	Project Office (Bioline, Scholarly Publishing)	1	22.89
2.2	Centre for Critical Development Studies	Academic Director's Office	1	16.73
2.2	Centre for Critical Development Studies	Co-op Coordinator	1	15.64
2.3	Shared Spaces b/w 1.2, 1.3, 2.0, 2.1, 2.2			197.01
2.3	Shared Spaces b/w 1.2, 1.3, 2.0, 2.1, 2.3	Staff Office	12	121.31
2.3	Shared Spaces b/w 1.2, 1.3, 2.0, 2.1, 2.4	Secure Exam Storage	1	22.29
		Librarian	1	12
		Business Officer	1	12.19
		Unassigned faculty office	2	23.22
		Print Station	1	6
3.0	Registrar's Office			368.51
3.0	Registrar's Office	Registrar Office	1	18.71
3.0	Registrar's Office	Business Office	1	11.94
3.0	Registrar's Office	Manager/Director	2	28.32

3.0	Registrar's Office	Reception/Waiting Area	1	30.27
3.0	Registrar's Office	Registrar Frontline/Multi-Station Admin	1	40.03
3.0	Registrar's Office	Convocation/Student Records Desk	1	19.25
3.0	Registrar's Office	General Workroom	1	13.90
3.0	Registrar's Office	General Student/Casual Room	1	13.90
3.0	Registrar's Office	Petitions Office	1	16.05
3.1	Registrar's Office	Systems and Scheduling Multi-office	1	27.84
3.1	Registrar's Office	Staff Office	7	57.46
3.1	Registrar's Office	Secure Exam Storage	1	23.19
3.1	Registrar's Office	Photocopy, Supply and Mail Room	0	0.00
3.1	Registrar's Office	Office Storage Room	0	0.00
3.1	Registrar's Office	Kitchenette	1	10.49
3.1	Registrar's Office	Mail Room	1	20.85
3.1	Registrar's Office	Meeting Room	1	36.31
3.2	Admissions/Recruitment			407.61
3.2	Admissions/Recruitment	Manager/Director Office	2	29.05
3.2	Admissions/Recruitment	Staff Office	8	66.03
3.2	Admissions/Recruitment	Part-Time Staff Shared Office	0	0.00
3.2	Admissions/Recruitment	Multi-station Office	1	60.27
3.2	Admissions/Recruitment	General Workroom	0	0.00
3.2	Admissions/Recruitment	Storage	1	29.32
3.2	Admissions/Recruitment	Greenpath Shared Office	1	26.36
3.2	Admissions/Recruitment	Greenpath Staff Office	1	11.10

3.2	Admissions/Recruitment	Reception/Front Line	1	26.82
3.2	Admissions/Recruitment	Reception Lounge/Waiting Area	1	25.22
3.2	Admissions/Recruitment	Greenpath Business Officer	1	12.24
3.2	Admissions/Recruitment	Recruitment Director Office	1	17.82
3.2	Admissions/Recruitment	Small Meeting Room	1	15.92
3.2	Admissions/Recruitment	Recruitment Presentation Room	1	51.46
3.2	Admissions/Recruitment	Greenpath Staff Workroom	1	36.00
3.3	Financial Aid			49.57
3.3	Financial Aid	Staff Office	6	49.57
4.0	Centre for Teaching and Learning Services			108.60
4.0	Centre for Teaching and Learning Services	Active Learning Space in Study Space	1	108.60
5.0	International Student Centre			126.32
5.0	International Student Centre	Staff Office	7	83.58
5.0	International Student Centre	International Storage Room	1	8.17
5.0	International Student Centre	International Reception	1	14.29
5.0	International Student Centre	Group Advising Room	1	20.28
6.0	The HUB			164.45
6.0	The HUB	Director Office	1	14.00
6.0	The HUB	Staff Workstations	2	16.34
6.0	The HUB	Boardroom	1	29.93

6.0	The HUB	Student Workstations	1	104.18
7.0	Classrooms			628.01
7.0	Classrooms	236 Seat Classroom	1	402.34
7.0	Classrooms	42 Seat Classroom	2	225.67
8.0	Shared Support Spaces			745.91
8.0	Shared Support Spaces	Small Meeting Room (10-12 seat)	4	86.62
8.0	Shared Support Spaces	Large Meeting Room (25-30 seat) / Seminar	4	161.83
8.0	Shared Support Spaces	Lounge/Common Room	4	85.12
8.0	Shared Support Spaces	Office Storage	0	
8.0	Shared Support Spaces	Photocopy and Mail Room	2	37.37
8.0	Shared Support Spaces	Kitchenette	4	40.29
8.0	Shared Support Spaces	Visiting Faculty	5	60.73
8.0	Shared Support Spaces	Sessional Office	5	100.72
8.0	Shared Support Spaces	TA Office	8	76.49
8.0	Shared Support Spaces	Graduate and Post-Doc Office	6	96.74
9.0	Other Spaces			2292.87
9.0	Other Spaces	Commons - Student Study/Lounge Space	8	570.00
9.0	Other Spaces	Gymnasium	1	1450.15
9.0	Other Spaces	Storages for Exam Centre	4	131.74
9.0	Other Spaces	Invigilator Area for Exam Centre	1	8
9.0	Other Spaces	Express Coffee Outlet	1	40.68

9.0	Other Spaces	Commons Help Centre	1	20.05
9.0	Other Spaces	Departmental Student Association Offices	6	72.25
TOTALS				6460.62

Academic Department Space

Social Sciences departments will occupy the second through fifth floors of the new mid-rise structure. The spaces will be designed in such a way that the departments can function individually while also integrating shared functions and support spaces as well as cross interests. Faculty and staff will have discrete offices while graduate students, teaching assistants, sessionals, and post-doctoral fellows will be accommodated in larger shared spaces. Also shared for each floor of the mid-rise expansion will be a series of support spaces such as meeting rooms, seminar room, photocopy room and kitchen. The academic department located on the second floor will be sharing this space with the International Student Centre, which will have seven offices and one group advising room.

UTSC Commons

The Commons is conceived as a multi-use space that will include study space, lounge space, a CTL teaching lab, help desk and an express beverage outlet. The learning spaces will enrich the student experience by promoting a variety of types of interactions. Some interactions will be related to students and their course work, but others may involve extracurricular activities, socializing and study-break time in a pleasant atmosphere one that is safe and provides food and nourishment options. The majority of the space will flow freely over three levels, and contain a mixture of hard and soft seating to accommodate a variety of types of work, solo study, two by two, and 4-6 students interacting. While use of personal computers needs to be accommodated with wireless access and adequate electrical outlets, the space will not contain a large bank of common use computers. The Commons will also include a help desk where students can speak with a variety of academic experts to assist their research, writing, and technical skills, and café and lounge space for casual peer interactions. The UTSC Commons will provide a greatly needed increase in enhanced study spaces for students. Access to the Bladen Wing will be provided directly from the Commons.

In addition to the free flowing space, the Commons will contain the following distinct spaces:

- 1) A 48 seat facilitated study room that is acoustically insulated from the other space, designed to optimize small (4-6 students) group active learning that is not computer-based, but with one computer and AV set up for the entire room. When not in use for scheduled programming, students may use this area for study space. The room should appear welcoming and available from the more open spaces of the Commons.

2) Express beverage outlet

3) Help station with room for 3-4 work stations (one wheel chair accessible), each equipped with a computer and some storage space. This might also be a good location for a pay printer, hole punch, stapler etc. While it is expected that writing, IITS and library expertise would be regularly present at the Help station, other experts might also be present, such as academic advising. There may also be scheduled presence of media experts (e.g. website construction, applications, photography, videography, Excel, Powerpoint, etc.). The Centre for Teaching and Learning, with its Writing, Language Development and Math and Statistics Centres is a major source of academic support for students. While it will not move into the newly renovated facilities it will provide services at the help centre within the Commons, organize and schedule the facilitated study groups that occur within the Commons. Increased space for CTL's activities will occur as a secondary effect of the new build as CTL will be able to expand its student's offerings with offices acquired as Social sciences vacate the MW building.

Classrooms

One tiered classroom, at approximately 236 seats will be constructed within the space currently used for squash courts. The classroom will have continuous tables with as many outlets as can be accommodated. A middle aisle is preferable and will be accommodated if possible. In addition, two case-style, 42-seat classrooms will also be constructed at the basement level.

Office of the Registrar and Recruitment

The office of the Registrar has outgrown its current space in the Arts & Administration Building, and cannot accommodate the growing number of students who need to access the office. Long lines, stretching the length of the building are a normal condition at present. The Registrar and Recruitment area will move into the ground floor of the new mid-rise structure. Its expanded size will allow for increased assistance to students, reduced wait times and will provide a seating area for students that is conveniently located near the Learning Commons.

Exam Centre

The current gymnasium will be re-purposed to be a dedicated Exam Centre that will better serve the examination and testing needs of the campus, particularly as it grows. Final examinations and mid-term tests for a student body of some 11,700 students are currently scheduled throughout the campus in available classrooms and in the gym when Recreation and Athletics can make it available. This severely taxes available space and time and regularly results in multiple room sittings of the same exam. A proper exam/test centre, much like as exists on the St. George campus, with contiguous service facilities for invigilation, photocopying and secure storage for exam materials, will permit much more efficient and pedagogically sound scheduling of tests and final exams for a student body projected to reach 14,000 by 2018.

While the re-purposed space will be primarily utilized for exams and tests it should also be easily adaptable for flat-space special events, such as awards ceremonies, career fairs, conference plenary sessions or dinners and artistic performances that can be scheduled out of peak testing periods.

Non-Assignable Spaces

The non-assignable spaces include corridors, stairwells and mechanical spaces. The architect will receive further details from Facilities Management and other relevant departments at UTSC; room data sheets have been prepared for all spaces. Some specific requirements that have to be met in non-assignable spaces are the following:

- Lobby
- FM Storage Room
- Caretaking Store Room
- Crush Space/Circulation Space
- Janitor's Closets

Renovated Areas and New Construction

The Recreation Wing construction/renovation project is targeted to be complete by late 2016/early 2017, and will focus primarily on providing office space, classrooms and programmable space.

The conversion of this facility will add approximately 4,237 new NASMs (8,178 GSM) through the construction of an office mid-rise structure, and renovate approximately 2,223 NASMs (4,291GSM) the existing R-Wing, for a total of 6,461 NASMs or 12,469 GSM.

Floor Plans:

Full floor plans have been provided in Appendix 1.

Functional Plan

Basement

- UTSC Common
 - Student study space
 - CTL-Facilitated Study Teaching Lab
 - Express Beverage Outlet
 - Help Desk (IT/Library)
- 2 x 42 Seat Classrooms
- Lecture Theatre

Ground Floor

Registrar and Recruitment and Financial Aid offices

- Atrium
- Exam Centre
- Portion of UTSC Commons

2nd Floor

International Student Centre

The Hub

DSA and TA offices
Social Sciences Academic and Admin Departments
Support Space

3rd floor

Social Sciences Academic Departments
DSA and TA offices
Support Space

4th Floor

Social Sciences Academic Departments
DSA and TA offices
Support Space

5th Floors

Social Sciences Academic Departments
DSA and TA offices
Support Space

Renderings of Exterior Building of the New Highland Hall:



View from Military Trail (North West Corner)

West Entrance





South West Corner

East Entrance Facing Transit Loop
(South East Corner)



c) Building Considerations

The new mid-rise office structure is planned to be five storeys in height, and will include a basement. It is conceived as a single block with primary entrances located on the east and west sides. Local materials should be used where possible, for both interior and exterior elements. High quality, durable finishes are required to match surrounding landscape and buildings. As such, exterior finishes are to contain a combination of glazing/curtain wall and solid panels.

- Basement Level

The Existing Basement Level of the R-Wing is comprised of three parts: squash courts; dance studio; and fitness centre equipped with change rooms, washrooms and shower rooms.

The squash courts and dance studio areas contain double height volumes, with one storey below and one storey above grade. The squash courts will be demolished in full, while the dance studio space will be renovated. The proposed tiered classroom will be located in the area previously housing the squash courts. Two smaller classrooms will be designed within the existing weight room space. There will be dedicated crush space with the inclusion of a central stair up to the lobby, and two elevators. Much of the remaining existing basement level space will be shelled, and may accommodate library stack storage in the future. In

addition to the reorganized space, interior finishes are as described in the attached Room Data Sheets.

The lowest level of a multi-level Student Commons will also be located in the basement, with direct access to the Bladen tunnel. Large male and female washrooms will be created. In addition to the reorganized space, interior finishes are as described in the attached Room Data Sheets.

- Ground Floor Level

Two primary entrances are to be constructed at the ground level, on the east and west elevations. These entrances will lead directly into an atrium space, with access to elevators and a central stair, leading both to the offices on upper floors, and down to the lower level classrooms and student areas. Registrarial and student services will be accessed directly at the ground floor level.

The remaining existing floor area that is not the gymnasium will function as the Student Commons, with direct access from the west entrance.

The existing gymnasium will undergo cosmetic changes, as the volume of space will remain as-is. These alterations consist of new paint and new floor resurfacing. Additional interior finishes are as described in the attached Room Data Sheets. This area in its entirety is described as Interior Renovation.

- Second Floor (existing renovated)

The remaining existing floor area at this level will retain some of its existing functions, such as the existing elevator, stair and secondary entrance. However the majority of this space will be dedicated to proposed Hub space. This will include the removal of metal stud partitions and reorganizing the space to accommodate one single department's use that has a blend of open concept and walled offices. A new entrance off grade will be created within the existing opening in the exterior wall. In addition to the reorganized space, interior finishes are as described in the attached Room Data Sheets.

- Second – Fifth Floor Level (New Construction)

As previously mentioned, the R-Wing Renovation Project allows for the inclusion of five levels of new office construction. The new office addition will be framed with heavy structural steel.

Second Floor framing will consist of clear span steel framing with supplementary infill framing complete with precast core slab concrete decking.

Levels 3 through 5 will consist of a similar steel framed floor plate with the exception of dividing the span of the 'main' beam carrying the supplementary framing with an intermediate column. Such loads will then be transferred to the mid-point of the 'main' clear span beam.

The proposed office build will be separated from the gymnasium north wall by newly created circulation/atrium space. This void is to be framed with a roof consisting of sloped glazing units in aluminum frames with the intention of allowing natural light into all levels on the south side of the new office build.

Levels 2 through 5 will consist primarily of office space including meeting rooms, kitchenettes, and a small amount of teaching space, general circulation, washrooms, electrical rooms and janitorial spaces. Additional interior finishes and space programming is as described in the attached Room Data Sheets.

The cladding of the proposed office build will be a cost effective ratio established through the cost estimating procedure of both curtain wall, spandrel panels, sealed units, while the larger sum of vertical surface area being dedicated to glazing whether it be part of the curtain wall assembly or punched openings in a masonry rain screen cladding. Roofing membrane is to be of the inverted type. Consideration is to be given for allowing for 20% of the new roof surface to be dedicated to extensive green roof techniques as per municipal zoning bylaws.

Building characteristics and massing

The building is anticipated to be 5 levels above grade and 1 level below. The floor to floor heights will be minimum 4m. In general, teaching and student spaces will be located on the lower levels of the building while the upper levels will house faculty and administrative functions.

Material selection

The building will be designed to match surrounding landscape and buildings. As such, exterior finishes are to contain a combination of concrete, curtain wall, and masonry units/panels.

Key building components and systems

Mechanical/ Electrical and Data

Central Heating and Cooling Plant

The building is connected to the south campus central utilities plant. It is expected that the cooling and heating loads of the new addition, (300 tons of cooling and 3 Million BTU of heating) can be supported from the existing central utilities plant.

Modifications to how the central heating and cooling utilities are delivered to the new addition can create significant opportunities to optimize utility savings in the building.

The building should be designed to allow low temperature heating and other modern best practice technologies in building services design.

The building should be designed to accommodate future development in the central plant including a geothermal heat pump and other initiatives.

Power

Normal power will be supported by the new central switchboard electrical room installed in the R-Wing. Likely however work and modifications to the room and equipment will be required to accommodate electrical distribution system. However, upgrades in the stringency of the delivery of standby power will drive the need to increase the emergency/standby power to the facility, namely:

- Life safety and fire protection (fire pump in light of the tower, elevator)
- Emergency lighting requirements
- Elevators (in particular with the new tower)
- Information Technology and Record keeping for business continuity

An estimated amount of emergency power required for the build will be 150 – 300 KW and will move beyond the capacity of the Bladen wing generator which serves the area.

Further modifications to the connection of the standby power into the new electrical room in the basement level of the Recreation Wing will be required.

The standby power requirements however could be seen as an opportunity to improve the delivery of standby power to campus at large and create a centralized standby power plant which can be shared and prioritized as necessary.

Heating Ventilation and Air Conditioning

As a basis for preliminary costing, the building should be well-zoned for air handling to allow for system scheduling such that the office tower, classrooms, exam centre and other support areas all can be zoned separately. This will allow for the building to function efficiently as occupancy can be scheduled and the air handling systems can shut off in unoccupied hours.

The building should use modern air handling technology and design as described below:

- Variable air Volume with enthalpy wheels and CO2 Controls in the lecture halls
- VAV with CO2 in the offices and general areas
- The existing air handling system for the gymnasium and the student study space (formerly the gymnasium and key area) will be re-purposed with only minor modifications

Fire Protection

Fire service will likely require a separate feed from Military Trail as the area is currently not sprinklered.

Accessibility

The building will be accessible throughout and meet all University standards. Fully accessible washrooms will be provided throughout. Entrances will be designed for universal access rather than employing specialized ramps. At minimum, one of the elevators will be required to accommodate scooters.

Personal safety and security

Personal safety must be taken into consideration in the design of the building. The building will connect to the security system backbone which will run to security closets on each floor. From here, security connections will be extended to high security areas, in particular the lecture theatre, departmental offices and suites. Included as part of the central security system, will be the installation of a public address system that will be connected to the campus public address system (currently in process of installation) and CCTV cameras will monitor entry points to the building, lecture theatres, and other security demanding areas as identified. Card access is to be provided for all perimeter exterior doors, lecture theatres, office areas, elevator(s), and staircases.

The building will be sprinklered and have a standpipe system to meet the building code for its occupancy.

Servicing (including garbage and recycling, deliveries)

Each floor of the building will contain at least one janitor's closet. The closet on the ground floor must be a minimum of 2.5m wide by 6m long, (to permit storage of maids carts, floor scrubber machine and vacuums), and include a slop sink, one dedicated electrical outlet for recharging equipment, and storage shelves.

The other closets may be sized at a minimum of 1.5m x 3m and include a slop sink, storage shelves, and an electrical outlet.

Servicing/Deliveries will be via the existing loading dock at the adjacent Science Wing.

Elevators

There are to be two elevators planned for the building. The elevators are to be machine roomless type elevator sized practically to meet the loading and occupancy.

Acoustics

The design should ensure that any noise emissions from the Facility impacting nearby receptors falls within the acceptable sound level limits defined by the Ministry of Environment (MOE) in publications NPC-205 or NPC-232.

Noise mitigation designs should also be considered for off-property points of reception which are not defined as such in MOE Publication NPC-205/232. It is preferred if an effort is made to prevent the noise impact of the site to these points to be above a reasonably expected noise environment.

Signage and donor recognition

All signage is to abide by UTSC Signage and Graphics Standard dated September 28, 2011. The ground floor public areas should accommodate the display of public art, material relating to faculty and student work. At minimum, the space should be able to accommodate the length and width of glass vitrine cases. The exact sizing will be determined during the design phase.

Computing

This building will be fully connected to the campus fibre network from the neighboring Bladen Wing.

Detailed data drop requirements have been identified in the room data sheets and may require further development during design.

In consultation with IITS, appropriate locations for wireless transmitters will be identified and transmitters installed to provide the widest possible coverage.

Redundancy should be allowed in the size of the conduits to permit for additional future cabling.

Sustainability Design and Energy Conservation

Large volumes of outdoor air for ventilation are a major component of building energy consumption and a main energy conservation opportunity. In our case, the large volumes of air will be required in the exam centre and in the student study space.

Elements such as LED lighting, both internal and external, Low Temperature Heating and heat recovery for building reheating and the other options identified in the central utilities plant could enhance this as well. A view to the envelope overall would improve the energy consumption.

Also water conservation opportunities should be explored in this project. Large volumes of water could be used in the central washrooms in the gathering areas such as the exam center and student study spaces.

d) Site Considerations

The R-Wing is located on a prominent South Campus site, between the Student Centre and the newly constructed East Arrival Court, and forms part of the Military Trail frontage to the campus. Significant pedestrian travel occurs on all sides of the building, with stepped and ramped connections up to the Bladen Wing, Arts and Administration Building and the Science and Humanities buildings beyond. The East Arrival Court functions as the main bus drop-off for campus, thus the R-Wing is often the first building students encounter upon arrival to campus.

Key Considerations:

1. Building height is limited to a 5-storey structure (plus penthouse)
2. The site will take advantage of its prominent siting to provide an animated, well-designed public face to the campus and a welcoming entrance to those entering it, by foot, bicycle, bus or car.

3. 97 additional parking spaces will be needed with the by-law as it currently stands. Re-zoning process is underway to reduce the parking requirement for the campus properties.
4. Increased bicycle parking will be required and access to showers for cyclists will need to be considered.



Figure 5. Recreation Building on South Campus Site Location

Zoning

The UTSC campus is part of the Highland Creek Community Secondary Plan. The site for the Recreation Wing is zoned Institutional, with a permitted building height of five storeys.

The City's review municipal process typically takes between 6 and 9 months. University of Toronto Scarborough is currently working with the City's planning staff to allow for construction of the facility to begin on a sequential permitting basis in a time frame earlier than what would normally occur.

Master Plan

In 2011, UTSC completed a master planning process, which lays out a vision for the future of the campus with a specific emphasis on the development of the north campus. However, the south campus, where the R-Wing site is located, is expected to be refined in the coming years, with infill sites, new open space and better connections to the ravine. The Military Trail landscape in particular, is to be enhanced and connected to both sides of the campus as a pedestrian spine. The Master Plan notes the importance of a comprehensive pedestrian network, with important pathways to be treated as gateways to the campus itself. Sites such as the R-Wing are both highly public and highly trafficked, and are called out to serve as focal points for public art and other landscape investments.

Site boundaries, conditions and constraints

The site is bounded by an internal vehicular road running parallel to Military Trail to the east, the newly constructed East Arrival Court to the south, a newly constructed pedestrian ramp to the west and a forecourt and stairway to the north. Pedestrian traffic is significant on all four sides of the sites. The Student Centre is located on the opposite side of the forecourt, and entry to the Bladen Wing, upper level Student Centre and the Arts & Administration Building is facilitated from the upper plaza, reached via the pedestrian ramp and forecourt stair.

Beyond the building walls, the site is mostly hardscape, lacking articulation and amenities such as benches, site specific lighting, and plantings. The existing R-Wing building lacks canopies or other protective measures, and has few openings at ground level.

Relationship of new construction to adjacent buildings, structures, open spaces

Highland Hall should be designed to enhance its surroundings, with a principal entrance on the urban façade along Military Trail. The building will function as the de-facto arrival and departure point via the East Arrival Court. The design should recognize the need for interior and exterior campus connections, and provide those where possible.

Landscape and open space requirements

Landscaping will continue the streetscape pattern developed by the Student Centre and East Arrival Court. The existing service road running parallel to Military Trail, along the front of the campus, will be terminated at Highland Hall. Pedestrian access will continue through a new landscaped forecourt of Highland Hall, to the East Arrival Court beyond. A new, terraced, landscaped route will replace the stairs leading up to the Bladen courtyard, on the west side of the building. This will feature trees and benches.

Site access

The site is situated on Military Trail east of the Student Centre and west of the East Arrival Court. The campus drop-off loop circulates along the North side of the building while a pedestrian ramp on the South side links the East Arrival Court and upper plaza between the Student Centre, R-Wing, and Bladen Wing. Vehicular access to the site is best served from the drop-off loop driveway on the North side of the building.

Way finding

Interior signage and way finding to abide by the University of Toronto Scarborough Signage Standard. Exterior way finding should match what exists on the South Campus.

Soil conditions

Soil conditions are assumed to be identical to the neighboring East Arrival Court, which consisted mainly of sand fill. No known building restrictions have been noted.

Demolition of existing structures

Demolition of the squash courts, including foundations, will be required. Significant interior demolition will also occur.

Site servicing: existing

Existing stormwater runoff is collected in a 8” storm sewer line that makes its way through campus and eventually discharges in Highland Creek. Storm water management and runoff will also be reviewed as part of the Site Plan Application. Stormwater management must comply with the City of Toronto’s Green Standard.

Environmental issues, regional conservation, Ministry of the Environment

The site will require input from TRCA in the Site Plan Approval process to confirm setback from “top of bank”.

Hazardous waste disposal

It is expected that no hazardous wastes exist within the footprint of the building.

e) Campus Infrastructure Considerations

Utilities (electrical, water, gas, steam lines)

As discussed above the main electrical service will be extended from the existing Recreation Wing electrical room as well as emergency power from the central utilities plant.

Similarly as described in more detail previously, heating (steam) and chilled water will be extended from the central utilities plant as well as domestic hot and cold water services.

Sewer and storm water management

It is expected that existing sewer and storm water services will be utilized.

Communications (phone/data)

The campus is transitioning from Bell Centrex telephone system to a new Unified Communication (UC) platform which is currently in the implementation stage.

UC integrates voice communications, video conferencing, instant messaging and data services. It also provides unified messaging through voicemail-to-email integration. The feature-rich system will enable new ways of communication and collaboration on campus.

This new system will be installed in the newly renovated R-Wing.

Roads and pedestrian pathways

The existing service road running parallel to Military Trail, along the front of the campus, will be terminated at Highland Hall. Service vehicles will have full access to the loading and receiving areas, but will exit the campus directly in front of the area, rather than continue towards the east. Pedestrian access will continue through the landscaped forecourt of Highland Hall, to the East Arrival Court beyond.

Bicycle parking

Existing bicycle parking spots on the North side of the R-Wing will be maintained. New bicycle parking will be provided as per the requirements set out in Toronto's Green Standard.

Servicing and fire access

The current servicing and fire access for the building via the main drop-off loop will be maintained through construction.

Impact on other projects in sector

There are no impacts on other projects in this sector.

f) Co-Effects

Vacated Space

As all of these units decant from the MW building, this building will be repurposed to accommodate other functions. A key advantage to this strategy is that the building is less than 10 years old and is easily adaptable to accommodate new functions without significant investment in capital infrastructure. We hope to develop a comprehensive plan for these areas.

With the relocation of the office of the Registrar, the vacated space in the AA building could become a new home for Development and Alumni Relations, currently located in the IC. The remainder of the space could be used for UTSC governance as well as the Accessibility office. The vacated Accessibility space could become the new home of DCM which is currently housed in the portables that will be dismantled in 2015. The space in the Instructional Centre, vacated by DARO, could become expansion space for Co-op.

Parking

UTSC is currently engaged in a re-zoning process to enact a "new" parking by-law standard of 1.75 parking spots per 100 sq. m. This process is expected to be complete in the coming months and will ensure that no further parking is required as a result of this project.

Staging

All exams currently held in the gymnasium will need to be accommodated elsewhere for the duration of construction.

g) Schedule

Below outlines key scheduling dates for the project. Though a completion date of July 2017 is outlined below, it would be ideal for the completion date to be closer to early spring 2017.

Milestones/Deliverables	Target Date
UTSC Campus Affairs	January 12, 2015
UTSC Campus Council	February 4, 2015
Governing Council	April 1, 2015
Construction start	August 2015
Substantial completion	July 2017
Occupancy	August 2017

IV. Resource Implications

a) Total Project Cost Estimate

The total estimated project cost for the project includes estimates or allowances for the following:

- construction costs (assuming design/build procurement to aid in compressed schedule and budget control)
- contingencies
- taxes
- site service relocates including water, sanitary, storm and natural gas, electrical connections
- landscaping
- permits and insurance
- professional fees, architect, engineer (assumed within Design Build proposal), misc consultants (ie. AV etc.), project management.
- computer and telephone terminations
- moving
- furniture and fixed equipment
- miscellaneous costs [signage, security, other]
- commissioning
- escalation
- project financing costs, see cash flow

b) Operating Costs

The total annual costs for this facility are estimated at \$945,000, related to utilities, building and maintenance costs.

c) Funding Sources

The funding sources for the project are UTSC Operating Funds, Capital Campaign, Provost Central Funds, and award of the Ontario Major Capacity Expansion Program (as cash). Additional financial costs will also need to be considered in regard to the co-effects that will be generated:

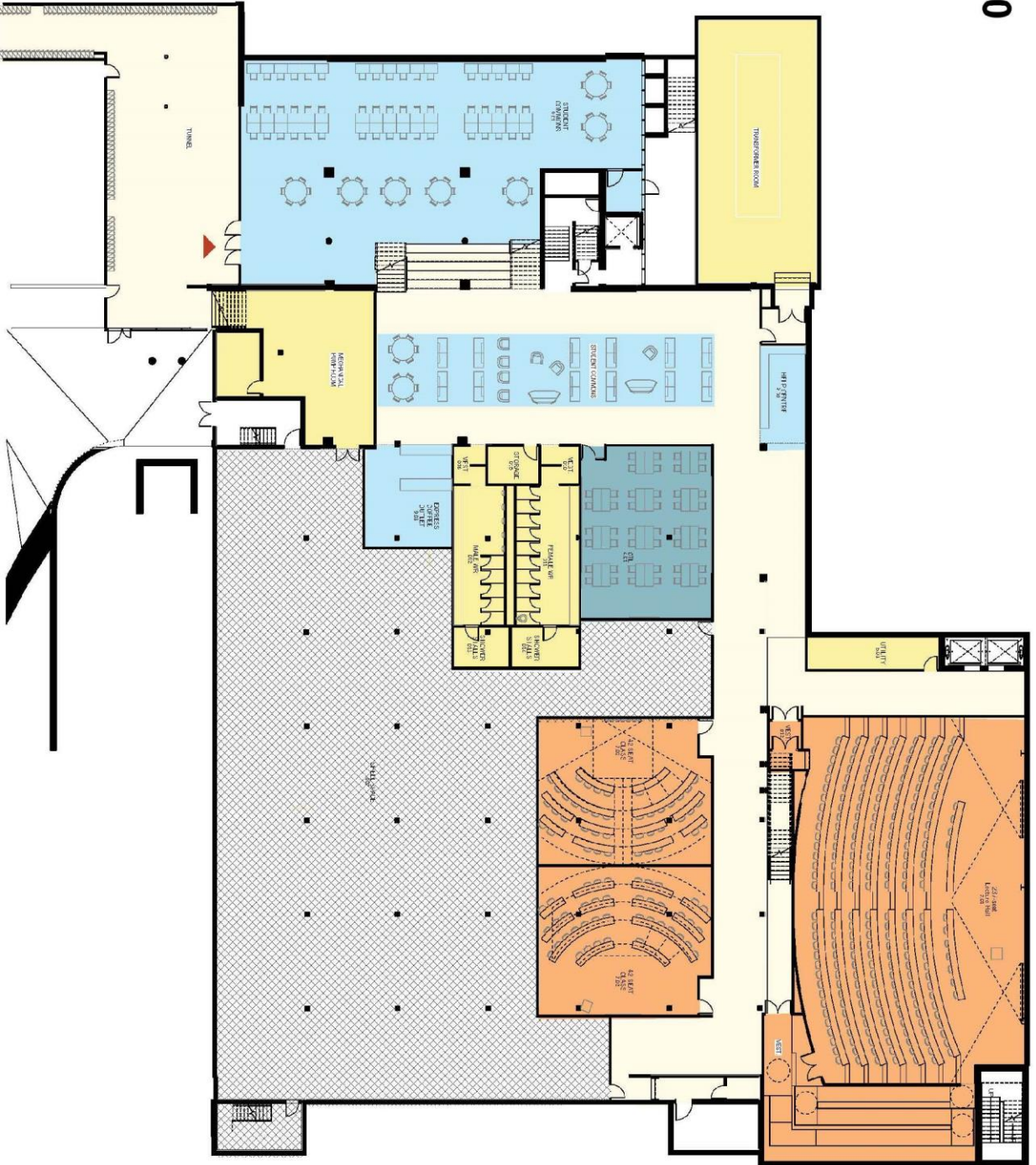
- The portables will need to be removed and the S-Wing field will need to be fixed
- Areas vacated by departments moving into the new building will need to be renovated

APPENDICES:

1. Floor Plans and Exterior Views
2. Existing Space Inventory
3. Space Utilization and Requirement Analysis
4. Room Specification Sheets (on request)
5. Total Project Cost Estimate (on request to limited distribution)

APPENDIX 1

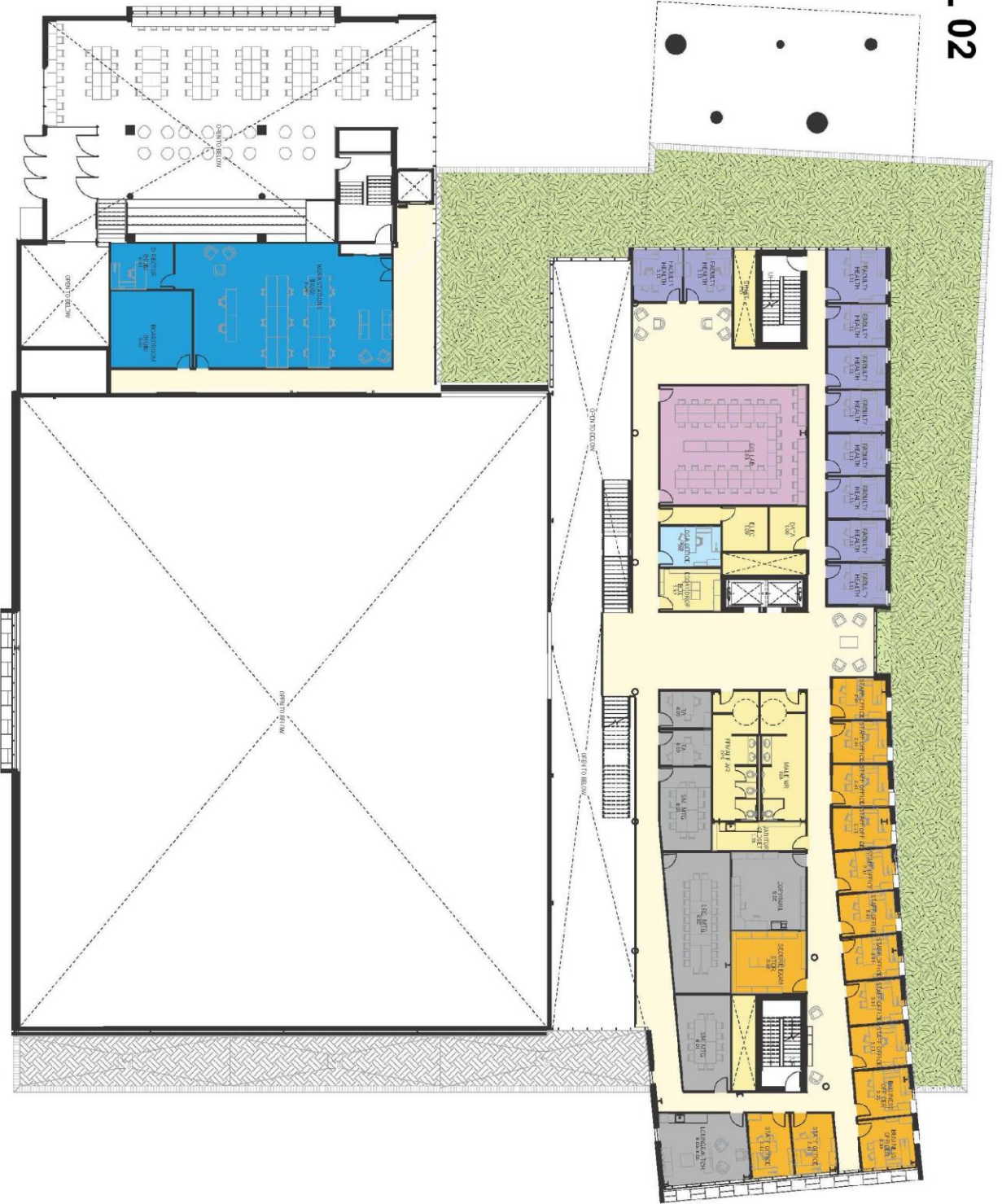
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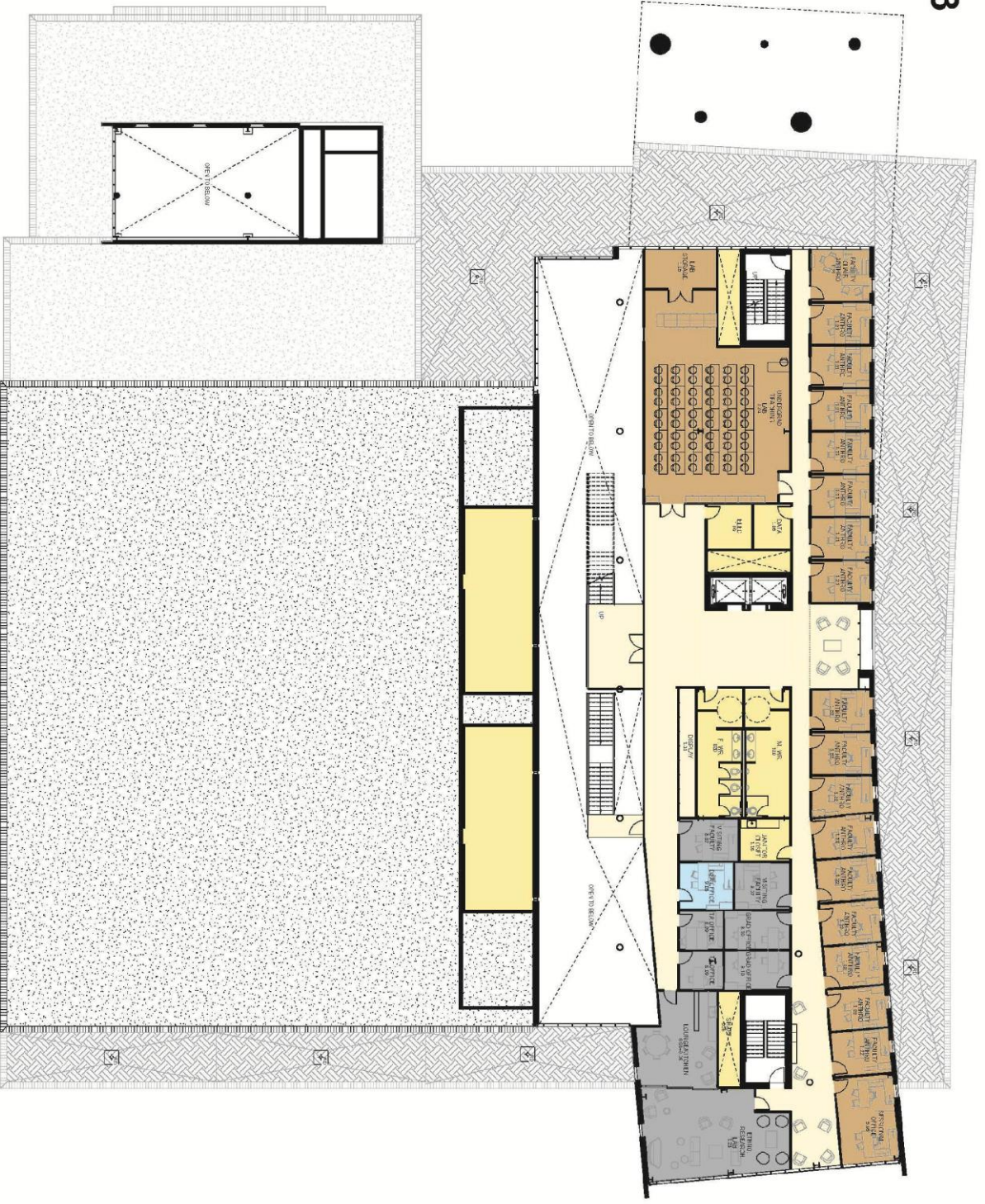
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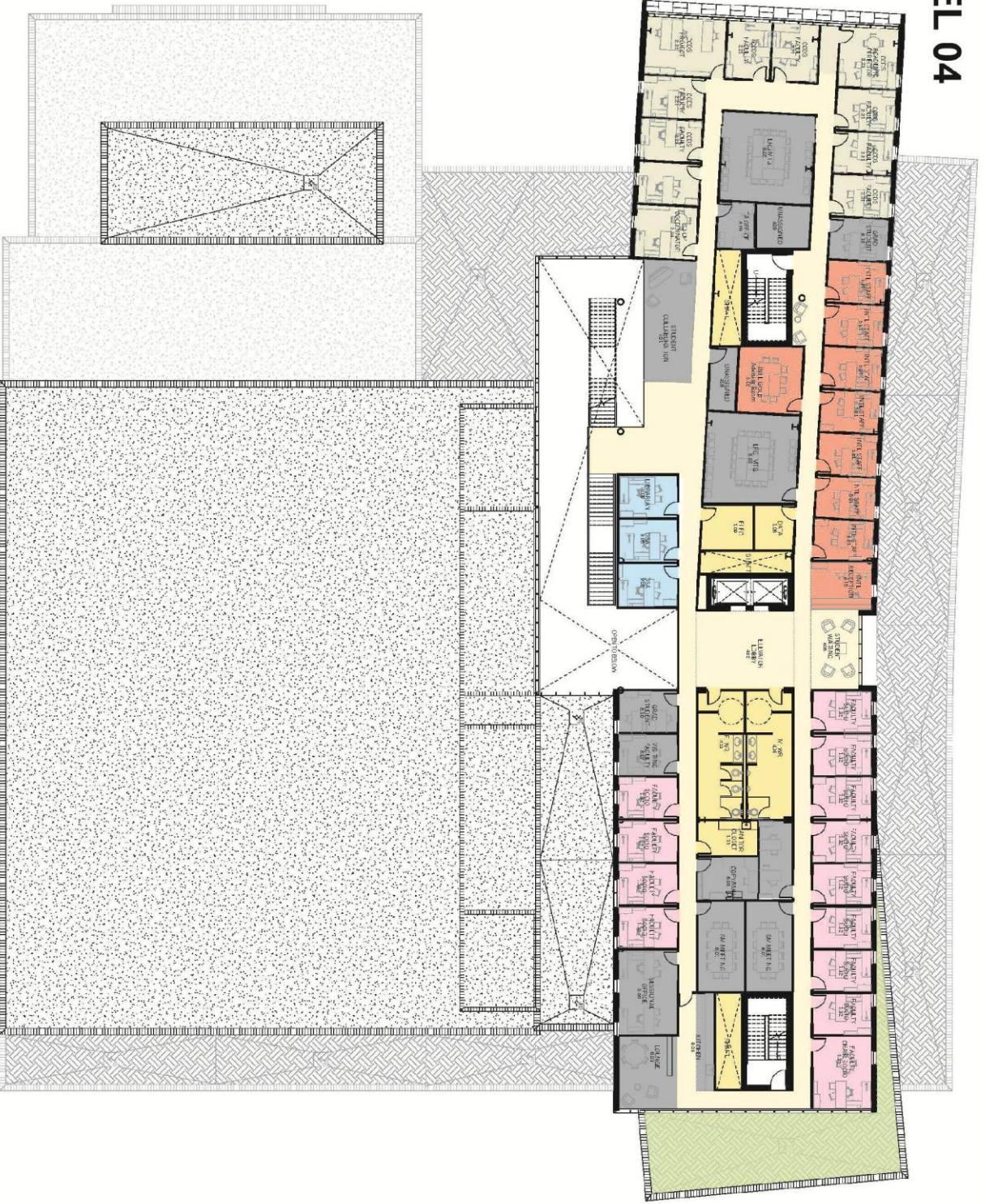
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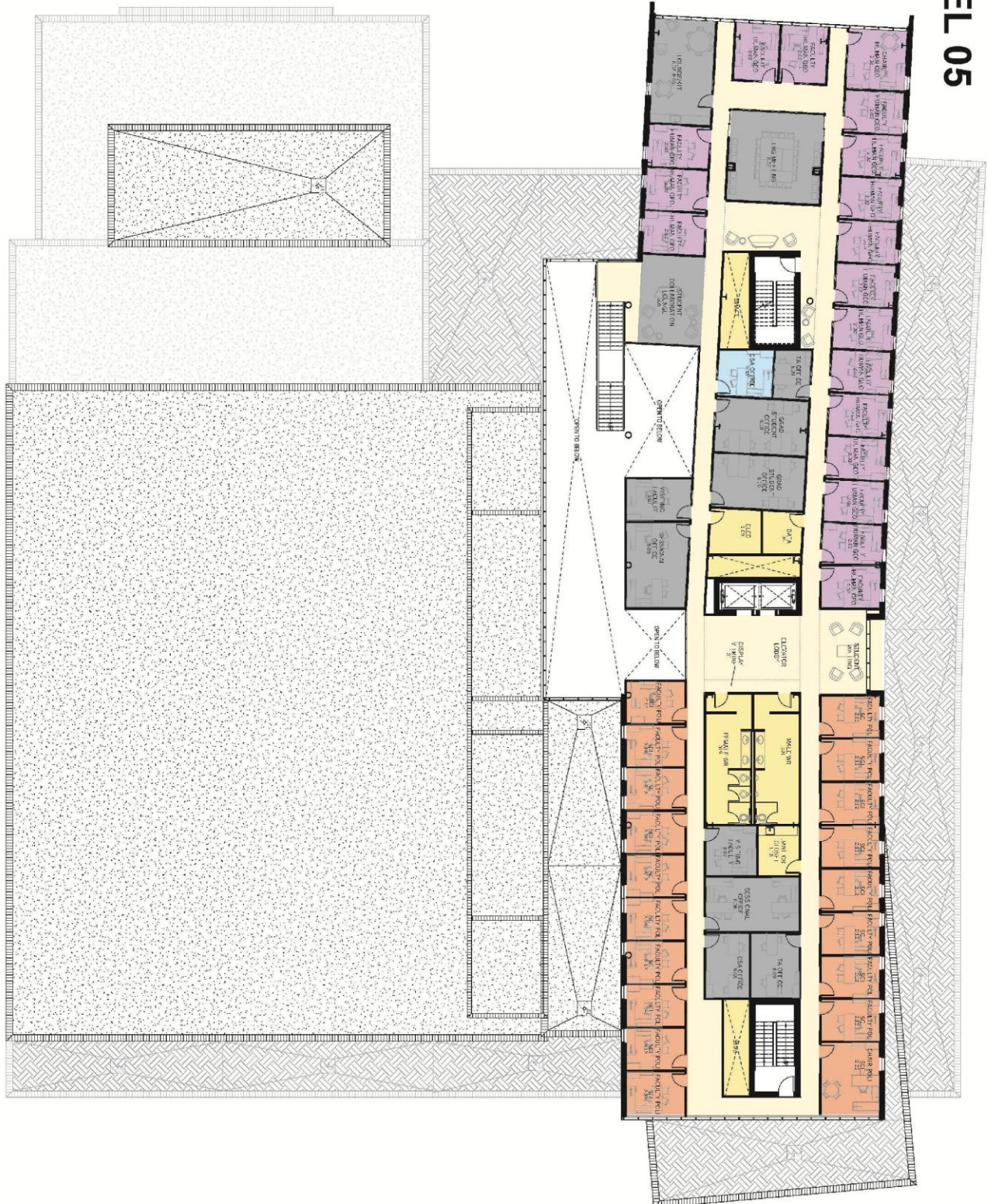
LEVEL 03



LEVEL 04



LEVEL 05





Section through Atrium



Section through Student Commons



West Elevation



South Elevation