UNIVERSITY OF TORONTO

OFFICE OF THE GOVERNING COUNCIL

FOR ENDORSEMENT AND FORWARDING **PUBLIC** **CLOSED SESSION**

TO: Executive Committee

SPONSOR: Scott Mabury, Vice President, Operations and Real Estate Partnerships
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PRESENTER: Christine Burke, Assistant Vice President, University Planning
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DATE: December 1, 2020 for December 8, 2020

AGENDA ITEM: 3(a)

ITEM IDENTIFICATION:

Capital Project: *Report of the Project Planning Committee for the Academic Wood Tower*

JURISDICTIONAL INFORMATION:
Pursuant to section 4.2.3. of the Committee's terms of Reference, "…the Committee considers reports of project planning committees and recommends to the Academic Board approval in principle of projects (i.e. space plan, site, overall cost and sources of funds)."

Under the Policy on Capital Planning and Capital Projects, "…proposals for capital projects exceeding $20 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. Normally, they will require approval of the Governing Council. Execution of such projects is approved by the Business Board. If the project will require financing as part of the funding, the project proposal must be considered by the Business Board."

GOVERNANCE PATH:

A. Project Planning Report

1. Planning and Budget [for recommendation] (October 28, 2020)
2. Academic Board [for recommendation] (November 18, 2020)
3. Business Board [for approval, financing] (November 25, 2020)
4. **Executive Committee [for endorsement and forwarding] (December 8, 2020)**
5. Governing Council [for approval] (December 17, 2020)

B. Execution of the Project:

1. Business Board [for approval] (November 25, 2020)

PREVIOUS ACTION TAKEN:

On March 2nd, 2018, the CaPS Executive Committee approved funding requested to proceed with hiring consultants for design through to the end of Design Documents. Patkau/MJMA Architects were formally retained.

100% Design Developments documents were completed in March 2019. A site-specific rezoning of the site was obtained in July 2019, with development engineering conditions to be met as outlined in the Final Staff Report.

On August 30, 2019, The University approved additional funding to continue the ongoing Municipal Approvals processes, specifically Site Plan Amendments.

A second request for additional funding was brought to the CaPS Executive Committee on April 23, 2020 to proceed and execute contribution agreements to the Green Contribution through Wood (GCWood) Program.

HIGHLIGHTS:

The proposed Academic Wood Tower will be an iconic, precedent-setting building at a unique site on the St. George campus. Situated between the Munk School of Global Affairs & Public Policy at 315 Bloor Street, and the Goldring Centre for High Performance Sport, the tower will be the first tall wood structure in Ontario. It is intended that the tower become a prototype for the use of mass timber/tall wood both nationally and worldwide. Given the prominent sustainable effort driving the project, the design approach will both reveal this unique timber structure to the street, while also responsibly designing the building envelope to respond to its four unique solar conditions via a passive design strategy.

Identified as a development site in the 1997 University of Toronto Secondary Plan, the southern portion of the site was developed for the Goldring Centre for High Performance Sport, completed in 2014. The foundations, basement and first floors of this future Academic Wood Tower were constructed at the same time as the Golding Centre, as well as the tower core up to level four. This includes an at-grade servicing facility for the Goldring Centre, 315 Bloor Street West, Woodsworth College, Woodsworth College Residence and the future Academic Wood Tower. Zoning permission was secured through City Council for a total height of 75m (81 metres including mechanical penthouse) in July 2019, with development engineering conditions to be met as outlined in the Final Staff Report. The height has been further reduced to 71m (77m including mechanical penthouse) due to the removal of a raised floor system during design revisions. Site Plan Amendments for both this site and the adjacent Woodsworth Residence are required. The Site Plan Application was submitted in May 2020.

Between October and December 2016, Patkau|MJMA, with sub-consulting from Blackwell Structural Engineering and AW Hooker Quantity Surveyors, undertook a study to explore the feasibility of using a wood

structure for the tower. This was determined to be a feasible approach, with advantages that include environmental sustainability, aesthetics/branding, occupant experience, and local advancement of forestry and construction industries in areas of research and economic viability.

The Ontario Building Code currently limits the use of wood to 6 storeys; a regulation that was established by the capacity of light frame wood buildings. This project will seek building permit approval by demonstrating that all relevant structural criteria are met using mass timber. Mass timber differs significantly from light frame wood in its structural capacity and its inherent fire-resistance. Approval for the tower will involve working with the Chief Toronto Building Official, with support from the Canadian Wood Council.

The tower will primarily accommodate the academic and research requirements of four groups: Rotman's Executive Programs along with Rotman Research space, Faculty of Kinesiology & Physical Education's research activities and administration, Arts & Science's Masters of Mathematical Finance program, and graduate, teaching, research and faculty expansion within the Munk School of Global Affairs & Public Policy including two active-learning classrooms previously planned for use by ACE.

A space program has been developed at 5,334 nasm, with a gross area of 11,143 gsm.

Secondary Effects

Construction staging requirements are to be determined, with the closure of Devonshire Place as a likely outcome. For the construction of Goldring, access along Devonshire Place was closed at Bloor Street on the northern end and at the Varsity Stadium fire route on the southern end. A similar scenario is likely for this project.

No swing space is required as this is new construction, without demolition. There will be impacts on the Munk School of Global Affairs & Public Policy and the Goldring Centre during construction. It is likely the north lobby of the Goldring Centre will be closed for the duration of the construction. As both buildings will be connected to the tower, there will be access restriction to the impacted areas. A strategy for noise will need to be developed by the contractor to ensure minimal disturbance to the occupants of both buildings. In addition, a new, temporary access plan must be developed for the clinic at Goldring, which currently uses the tower lobby.

There is currently no parking on this site; no loss will be incurred.

Schedule

Please note that the schedule below provisionally assumes construction management as the project delivery method. Other delivery methods and their respective schedule implications continue to be explored to evaluate the most beneficial approach on this project.

The anticipated schedule for the project is as follows:

- March 02, 2018 — CaPS Executive approval to engage consultants to proceed through Design Development
- March 2019 — Completion of 100% Design Development phase

• April 23, 2020	CaPS Executive in-between meeting approval (for anticipated contribution to GC Wood Agreement)
• October 02, 2020	Cycle 2 CaPS Executive for full project Governance approval
• December 17, 2020	Cycle 2 Governing Council Approval
• January - March 2021	Procurement of Construction Manager (CM) and Design Assist (DA) team
• April - September 2021	CM pre-construction services, integration of DA teams, completion of early/primary construction or tender packages, early building permits [*1,2,3]
• Fall 2021	Mobilization and start of Construction [*4]
• Summer 2023	Building Occupancy

Notes:

1. The procurement of the CM is the critical path of the project schedule.
2. The use of the CM delivery method is anticipated to allow us to fast-track the project and start on site before the completion of the CD phase.
3. Intent is to engage Design Assist for the mass timber and envelope components of the building as early procurement design services, with materials and erection packages assigned to the CM.
4. Start of construction is contingent on receipt of necessary approvals from various authorities having jurisdiction.

FINANCIAL AND PLANNING IMPLICATIONS:

Discussion of overall costs and sources of funds can be found in the *in camera* document for this project.

RECOMMENDATIONS:

Be It Resolved:

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

THAT the *Report of the Project Planning Committee for the Centre for the Academic Wood Tower* dated September 18, 2020 (revised November 10, 2020), be approved in principle; and,

THAT the project totaling 5,334 nasm (11,143 gross square metres (gsm)), be approved in principle, to be funded by Divisional Reserves, Operating Budget Contribution, Fundraising, Provostial Funds, Government Funding and Borrowing.

DOCUMENTATION PROVIDED:

- *Report of the Project Planning Committee for the Academic Wood Tower* dated September 18, 2020 (revised November 10, 2020)

Report of the Project Planning Committee for
Academic Wood Tower

September 18, 2020
(revised November 10, 2020)

I.Executive Summary

The proposed Academic Wood Tower will be an iconic, precedent-setting building at a unique site on the St. George campus. Situated between the Munk School of Global Affairs & Public Policy at 315 Bloor Street, and the Goldring Centre for High Performance Sport, the tower will be the first tall wood structure in Ontario. It is intended that the tower become a prototype for the use of mass timber/tall wood both nationally and worldwide. Given the prominent sustainable effort driving the project, the design approach will both reveal this unique timber structure to the street, while also responsibly designing the building envelope to respond to its four unique solar conditions via a passive design strategy.

Identified as a development site in the 1997 University of Toronto Secondary Plan, the southern portion of the site was developed for the Goldring Centre for High Performance Sport, completed in 2014. The foundations, basement and first floors of this future Academic Wood Tower were constructed at the same time as the Golding Centre, as well as the tower core up to level four. This includes an at-grade servicing facility for the Goldring Centre, 315 Bloor Street West, Woodsworth College, Woodsworth College Residence and the future Academic Wood Tower. Zoning permission was secured through City Council in July 2019 for a total height of 75m (81 metres including mechanical penthouse), with development engineering conditions to be met as outlined in the Final Staff Report. The height has been further reduced to 71m (77m including mechanical penthouse) due to the removal of a raised floor system during design revisions.

Between October and December 2016, Patkau|MJMA, with sub-consulting from Blackwell Structural Engineering and AW Hooker Quantity Surveyors, undertook a study to explore the feasibility of using a wood structure for the tower. This was determined to be a feasible approach, with advantages that include environmental sustainability, aesthetics/branding, occupant experience, and local advancement of forestry and construction industries in areas of research and economic viability.

The Ontario Building Code currently limits the use of wood to 6 storeys; a regulation that was established by the capacity of light frame wood buildings. This project will seek building permit approval by demonstrating that all relevant structural criteria are met using mass timber. Mass timber differs significantly from light frame wood in its structural capacity and its inherent fire-resistance. Approval for the tower will involve working with the Chief Toronto Building Official, with support from the Canadian Wood Council.

The tower will primarily accommodate the academic and research requirements of four groups: Rotman's Executive Programs along with Rotman Research space, Faculty of Kinesiology & Physical Education's research activities and administration, Arts & Science's Masters of Mathematical Finance program, and graduate, teaching, research and faculty expansion within the Munk School of Global Affairs & Public Policy including two active-learning classrooms previously planned for use by ACE.

Site Plan Amendments for both this site and the adjacent Woodsworth Residence are required. The Site Plan Application was submitted in May 2020.

A space program has been developed at 5,334 nasm, with a gross area of 11,143 gsm

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II.Project Background

a) Membership

Vince Tropepe, (Co-Chair) Professor, Vice-Dean Research, Faculty of Arts & Science*
Lucy Chung, Director, Infrastructure Planning, Faculty of Arts & Science
Lisa Neidrauer, Senior Planner, Infrastructure Planning, Faculty of Arts & Science

Michael Sabia, Director, Munk School of Global Affairs & Public Policy*
Ariana Bradford, Executive Director, Munk School of Global Affairs & Public Policy*
Khilola Zakhidova, Lead, Strategic Research, Munk School of Global Affairs & Public Policy*

Ira Jacobs, Dean and Acting Chief Administrative Officer, Faculty of Kinesiology & Physical Education*
Paul Handley, Chief Administrative Officer, Faculty of Kinesiology & Physical Education*
Doriano D'Angelo, Director of Facilities, Faculty of Kinesiology & Physical Education*

Joanne Oxley, Vice Dean, Research, Strategy and Resources, Rotman School of Management*
Mary Lyne, Chief Administrative Officer, Rotman School of Management*
Julie Finkle, Manager, Capital Projects, Rotman School of Management
Stephanie Hodnett, Executive Director of Rotman Executive Programs*
Dr. Bart Tkaczyk, Rotman School Student of Executive Education*

Christine Burke, Assistant Vice-President, University Planning*
Costas Catsaros, Director, Project Development, University Planning, Design and Construction*
Ron Saporta, Chief Operating Officer, Property Services & Sustainability*
Gordon Robins, Director, Utilities & Building Operations
Steve Bailey, Director, Academic and Campus Events
Michal Kuzniar, Senior Planning Associate, University Planning*
* new members since project planning committee approval

b) Terms of Reference

1. Prepare a detailed space program and functional plan that will accommodate the Rotman Executive program, and portions of the Munk School of Global Affairs & Public Policy, Faculty of Kinesiology & Physical Education, in a new facility located on the northern portion of development site 12, on Devonshire Place.
2. Demonstrate that the proposed space program is consistent with the Council of Ontario Universities' (COU) space standards and University of Toronto space standards.
3. Determine a functional layout of the space required.
4. Determine the secondary effects of the project and the impact on the delivery of academic programs and activities in the sector during construction.
5. Identify all equipment and moveable furnishings necessary to the project and their related costs.
6. Identify all data and communications requirements and their related costs.
7. Identify a signage strategy for the new building.
8. Determine a total project cost (TPC) estimate for the capital project, including costs associated with secondary effects and infrastructure.
9. Identify all sources of funding for the capital project and any increased operating costs once the project is complete.

c) Background Information

The site is located on the west side of Devonshire Place, south of the Munk School of Global Affairs & Public Policy at 315 Bloor Street West. Identified as a development site in the 1997 University of Toronto Secondary Plan, the southern portion was developed for the Goldring Centre for High Performance Sport, completed in 2014. The 2011 University of Toronto Master Plan anticipated a second phase of development on the northern portion of the site, with connections to both the Goldring Centre for High Performance Sport and the Munk School of Global Affairs & Public Policy. A building envelope, including a 33m x 24m tower, rising to 73m high (not including the mechanical penthouse), was proposed in the Master Plan, which is consistent with the UofT Draft Secondary Plan's Urban Design Guidelines, which identify a height of 74m (not including mechanical penthouse) on the project site. The northern edge of the tower was set back from the rear edge of the original building at 315 Bloor Street. Patkau Architects and MacLennan Jaunkalns Miller Architects (now Patkau|MJMA Associated Architects) included a tower concept in their planning and design of the Goldring Centre. The tower has a typical dimension of 33m x 25 m at the upper floor levels.

The foundations, basement and first floors of this future Academic Wood Tower were constructed at the same time as the Golding Centre, as well as the tower core up to level four. This includes an at-grade servicing facility for the Goldring Centre, 315 Bloor Street West, Woodsworth College, Woodsworth College Residence and the future Academic Wood Tower.

Numerous faculties and departments residing in this sector of the campus have expressed space needs that could be accommodated in the Academic Wood Tower. It is expected that the Munk School of Global Affairs & Public Policy, the Rotman Executive Program, the Faculty of Kinesiology & Physical Education and the Master of Mathematical Finance (part of the Faculty of Arts & Science) will jointly occupy the tower. Compatible uses were examined and shared facilities were proposed where possible. Further, Patkau|MJMA Associated Architects were retained by Rotman in 2014 for the Executive Education program to develop a functional plan and conduct a feasibility study for the tower as a whole. This study provided favourable input on the accommodation of the Executive Program within the Tower.

During the construction of Goldring Centre for High Performance Sport, the consultants made structural assumptions to guide the design. The tower was assumed to be a steel structure. Between October and December 2016, Patkau|MJMA, with sub-consulting from Blackwell Structural Engineering and AW Hooker Quantity Surveyors, undertook a study to explore the feasibility of using a wood structure for the tower. This was determined to be a feasible approach, with advantages that include environmental sustainability, aesthetics/branding, occupant experience, and local advancement of forestry and construction industries in areas of research and economic viability.

The Ontario Building Code currently limits the use of wood to 6 storeys; a regulation that was established by the capacity of light frame wood buildings. This project will seek building permit approval by demonstrating that all relevant structural criteria are met using mass timber. Mass timber differs significantly from light frame wood in its structural capacity and its inherent fire-resistance. Approval for the tower will involve working with the Chief Toronto Building Official, with support from the Canadian Wood Council.

1997 zoning permissions allowed for a height of 28m, thus a site specific rezoning application was required to secure these additional development permissions. It was successfully passed through City Council in July 2019 with development engineering conditions to be met as outlined in the Final Staff Report. Two site plan amendment applications are required on this site and the adjacent Woodsworth College Residence.

d) **Statement of Academic Plan**

The tower will primarily accommodate the academic and research requirements of four groups: Rotman's Executive Program, Rotman Research Centre, Faculty of Kinesiology & Physical Education's research activities and administration, Arts & Science's Masters of Mathematical Finance program, and graduate, research and faculty expansion within Munk School of Global Affairs & Public Policy. The details of these programs are described below.

Rotman Executive Program

The Executive Education industry is currently facing a significant disruption, as executive clients are demanding substantive skill and capability development outcomes from their executive program providers. This makes it more difficult for business schools to offer re-packaged or traditional lecture-style programming. The increasing growth of online and e-learning platforms, along with the rapid proliferation of corporate universities as 'in-house' space for skill development, are raising the bar for the kinds of programs that organizations will send their executives offsite – to the campus of a business school, for. The executive learning program of the near future is one that will; look radically different from the one executives and business schools are used to seeing and producing. Executive learning must be contextualized, personalized and socialized in ways that adapts to new technological based learning requirements.

In order for Rotman's Executive Programs to compete and achieve a significant growth in its client base, depth and breadth of its programming, they must raise standards for in-person, on-campus executive development experiences. It is critical the new Academic Wood Tower provide state-of-the-art facilities that enable flexible layouts, collaborative, technology-assisted learning are a critical part of the value proposition the Rotman School needs to make to its executive learners. Along with top quality classrooms, the Rotman School is pioneering advanced technologies and techniques for the advancement, of high value skill development, to attract the Canadian corporate elite as clients.

Rotman Exec Program has a revenue of $16MM/year, and ~3600-participant executive learners but the school strives to grow this revenue to $30MM/ year. A new top quality facility will contribute to this increase, but growth in revenue will not be fully based on increased classroom time. Advanced cloud based learning, online modules and special developed custom programs will collectively contribute to this as well.

Executive Education teaching is non-degree learning and therefore the student FTE is variable. COU calculations for Executive Education classrooms and support spaces cannot be calculated on an FTE bases, but are driven by providing quality experience for learning with generous space for participants with supplementary spaces such as dining, lounges and break-out spaces that contribute to the experience of the Executive learning environment. Sizes of classrooms are based on Exec. Ed market drivers, but tend to be smaller, more intimate, learning environments that promote discussion and discourse.

The current staff complement for Rotman Executive Education is 38 FTE.

Rotman Research Centres

In April 2016, the Rotman Estate announced a legacy gift of $30 Million to the Rotman School and established the Rotman Catalyst Fund (total fund of $45 Million). This fund supports initiatives in the

School's three areas of academic emphasis – entrepreneurship and innovation, a global mindset, and leadership in financial management and good governance. It seeds intrepid thinking on the most pressing problems, and initiatives are granted funding on the basis of a sustainable business plan. Space for these Research Initiatives has been growing significantly as result of successful Research Initiatives. Rotman School at 105 St. George will soon run out of capacity for the type of research space for these new Research Centers that are established.

Faculty of Kinesiology and Physical Education

The Faculty of Kinesiology and Physical Educations plans to relocate administrative and research functions from multiple locations around campus into two floors of the Academic Wood Tower. The spaces will be in close proximity to existing staff, faculty and student complement at the Goldring Centre for High Performance Sport.

The Faculty will create an academic and research neighbourhood, clustering faculty and their affiliated graduate students in the same location. This approach will allow for collaboration across and within research interest areas. Clustering like-minded spaces and creating 'hubs" has proven to be an effective space management strategy that creates a sense of community and fosters collaboration. The new space will be state of the art with a welcoming approach and exterior glazing that will allow access to natural light. These concepts will also apply to graduate student space.

By moving these faculty and graduate student spaces to the Academic Wood Tower this change will liberate existing space in both Warren Stevens and Clara Benson. This will also allow the Faculty to return the building it uses in the Huron-Sussex neighbourhood, 40 Sussex, to the University for faculty housing The Faculty is embarking upon a Master Planning exercise in Fall 2020 that will inform the best use of these liberated spaces - and all spaces within Warren Stevens and Clara Benson - which will be informed through broad consultations with the KPE community. Potential examples for these reimagined spaces include student space, growing need for research space (wet lab), seminar and classroom space, and allow the Faculty to address much need accessibility issues in Clara Benson.

On a second floor in the tower, the Faculty wishes to locate several administrative units. These groups are currently accommodated in the Athletic Centre and leased space at 720 Spadina. The Faculty's goals are to create an administrative hub for the Deans office and the CAO administration. Provisions include office space for the Directors and staff of Finance, PR & Communications, IT, Human Resources and Advancement.

Currently the Deans Office and CAO Administration are spread across numerous areas throughout buildings and in leased space creating duplicative administrative requirements and needs. Faculty are currently located in older buildings that are prone to recurrent maintenance issues and some spaces do not conform to current space standards with an array of office sizes.

Munk School of Global Affairs &Public Policy

The Munk School of Global Affairs & Public Policy within the Faculty of Arts & Science brings together people passionate about addressing the problems of a fast-changing world. Its aspiration is to create a unique, world-leading research, teaching and public engagement site that builds the new field of global affairs from Canada. Home to world-renowned researchers and more than 40 academic centres, labs and programs, the Munk School includes:

- The Asian Institute
- The Centre for European, Russian and Eurasian Studies
- The Centre for the Study of the United States
- The Centre for the Study of Global Japan
- The Citizen Lab
- The Innovation Policy Lab
- The Global Justice Lab
- The Reach Alliance
- The Trudeau Centre for Peace, Conflict and Justice

Exceptional faculty and experts from around the world continue to gravitate to the Munk School. There are more than 230 affiliated faculty engaged in teaching and research, many of whom have cross-appointments in other faculties.

The Munk School is also home to 14 teaching programs, ranging from Munk One, a first-year foundational program with a focus on global problem-solving, to its two professional masters programs.

Undergraduate students at the Munk School can take majors ranging from Contemporary Asian Studies and American Studies to a degree in Peace, Conflict and Justice. Graduate students have a range of options, from the Master's in European, Russian, and Eurasian Studies to the Collaborative Master's in Asia-Pacific Studies.

The centrepieces of the Munk School's academic core are its Master of Global Affairs (MGA) and Master of Public Policy (MPP) programs. Designed to develop a new class of innovators and problem solvers tackling some of the world's most pressing challenges, these two-year programs offer a tailor-made, inter-disciplinary curriculum delivering the best of both an academic and a professional degree. The MGA requires students to take part in a global internship in their chosen field and the MPP a public policy internship. In addition, students have the opportunity to combine their degrees with ones from the Rotman School of Management (MBA) or the University of Toronto Faculty of Law (JD).

Over the next five years, the Munk School has an ambitious plan to grow its core faculty and its student complement as well as expand its research and engagement activities, the number of visiting scholars it hosts and fellows it collaborates with.

In 2010, the Dominion Meteorological Building at 315 Bloor Street West was extensively renovated to house the Munk School of Global Affairs & Public Policy. This building will provide a direct connection to new facilities in the Academic Wood Tower. Additional growth within the School has necessitated the use of temporary administrative and research space in the OISE buildings. As of March 2017, Munk is occupying 109% of the space it generates using COU analysis. Some of this excess space is the result of its occupation of 315 Bloor, namely due to pre-determined office and room sizes within a heritage building. In general, the faculty office and its support functions are over COU standards, while graduate and administration space is under. Graduate student space is in severe shortage, with only provided at 1% of the COU standard. Significant excess space in shown in category 4/Office Service, which is the result of Munk's event and conference room facilities in 315 Bloor and at Devonshire Trinity. In August 2018, the Munk School of Global Affairs and the School of Public Policy & Governance merged to become the

Munk School of Global Affairs & Public Policy. As a result, the School is now spread across multiple buildings (315 Bloor St, OISE, 1 Devonshire Place, University College and Canadiana Gallery. In order to create a cohesive and successful School there is a need to bring together faculty, students, staff, research labs and activities in a more concentrated space.

Masters of Mathematical Finance Program (MMF)

Masters of Mathematical Finance Program (MMF) started in 1998 as a unique collaboration experiment in a University that was beginning to form a vision of excellence in the mathematical sciences area. MMF has succeeded over the last twenty years in becoming the leading program in quantitative finance in Canada. Following the provincial budget cuts of 1995, the program was developed to operate on a self-funded model; tuition-only revenue with no government grant. The program obtains teaching services from several departments and from industry practitioners. MMF seeks to take existing opportunities and to move forward to further consolidate its position as the premiere quantitative finance program in Canada and to compete with other universities in North America and internationally.

In order to achieve this status and to advance the University's mission of international preeminence, certain structures must be in place: strong academic leadership, a first-class facility and strong partnerships with industry are key. Top ranked programs across the US and internationally all boast high brand visibility and high quality facilities with state of the art classrooms, collaborative work spaces and event facilities. MMF has established a solid reputation in the industry and provides highly trained and qualified talent to the large Canadian banks, the pension plans, consulting companies and to FinTech firms.

To continue its mission MMF must grow and seeks to expand student intake and create two streams of students within the Program; to create an Executive Training program and to create collaborative projects with industry that extend beyond the highly successful MMF internship. . The MMF program is delivered in modular format with an internship component in the second term. The program receives in excess of 400 applications per year and handicapped to a limit of 30 students due to current space limitations and a timetable that does not fit and often conflicts with a standard graduate program must have dedicated classroom space. The collaborative nature of the work students do in our program also means that the standard theatre style classroom and lab space diminishes the learning experience for students and makes group work difficult and cumbersome.

Graduate Enrolment Projections

Academic Year	Student Intake
2017-2018	31
2018-2019	35
2019-2020	45
2020-2021	55
2021-2022*	60

*Steady State

As a program MMF cannot make tenure-stream appointments and draws on faculty from Arts and Science; the Faculty of Engineering; the Rotman School of Management and a number of expert industry practitioners to act as instructors in the Program.

The MMF program is unique in giving significantly more technical training than would be offered in a business degree and industry trends will lead us to develop focus areas in innovation and regulation. Geographical focus will grow to outside Canada with an eye to emerging markets in Eastern Europe, Latin America and Asia. A new concept in design for an educational program involves enhanced and specialized space for staff, faculty and students. The current and poor level of space is detrimental to the delivery of both a world-class brand and a high level of experiential satisfaction for all members of the MMF community.

e) Space Requirements

Existing space

Rotman Executive program

The Rotman Executive Programs currently operates from leased space at the Stewart Building, 149 College Street, as well as space at 105 St. George for classroom delivery. The current space at 149 College does not offer the top quality state of the art environment that Executive learners expect from their facilities. In recent years the Rotman School has adjusted space bookings to offer more Executive Education teaching at the 105 St. George facility and with this classroom offerings and revenues have increased. The use of 105 St. George however is challenged as the School of Management continues to grow their academic programs which will reduce classroom availability. There is an increased urgent need to build the Academic Wood Tower in order to provide Executive Education with dedicated teaching space for their own use.

Rotman Exec Education currently occupies is 965 nasm of dedicated space, including classroom space, breakout rooms, dining space, lounge areas and administration space. In addition to the dedicated space, Executive Programs also book shared space at Rotman School of Management for a total of 3800 classroom delivery hours (or 356 days of teaching).

The dedicated space listed below will be vacated.

Building Code / Name	Space Category	COU Category Code	Rooms	Seats / Stations	Area (NASMS)
EP – 149 College Street	1 – Classroom Facilities	1.2 Non-Tiered Classrooms			200
		1.4 Classroom Service Space			196
	10 - Administrative Office And Related Space	10.1 - Central Administrative Offices			291
		10.2 - Central Admin Office Support			82
	7 – Food Service	7.1 Food Facilities			51
RT – 105 St. George Street	1 – Classroom Facilities	1.4 Classroom Service Space			68
	10 - Administrative Office And Related Space	10.1 - Central Administrative Offices			76
TOTAL			**44**		**964**

In addition, The Executive Program has access to bookable space at 105 St. George Street:

	Qty of Rooms	Hours used/ year	Days
Flat floor classroom @48 seats	1	257	22
60 seat classroom	2	1264	112
70 seat classroom	1	1578	156
Other Classrooms	Varies	740	66
Subtotal Classroom delivery		**3839**	**356**
Dining rooms (note- 1 dining room booking could be shared due to staggered meal time)	Various	3074	273
Break out rooms (approx. 6-10 rooms booked each classroom teaching day).	Varies		

Faculty of Kinesiology and Physical Education

FKPE Administration and Faculty occupy 1208 nasm across four buildings; 720 Spadina, 40 Sussex Avenue, Warren Stevens, and Clara Benson.

The Faculty occupies 158 nasm of third party leased space at 720 Spadina Avenue for administrative purposes. The space will be vacated following the completion of the Academic Wood Tower where the staff will be relocated.

Additionally, FKPE has research and administrative activities taking place in the Huron Sussex neighbourhood at 40 Sussex Avenue occupying 173 nasm. These faculty would ideally be co-located within a FKPE building on campus. Currently faculty working in these locations are isolated from their FKPE colleagues; additionally there is pressure to vacate the houses they are working in, to be used for faculty housing.

The following spaces will be vacated:

Building Code / Name	**Space Category**	**COU Category Code**	**Rooms**	**Seats / Stations**	**Area (NASMS)**
SX - 40 Sussex Avenue	4 - Academic Office & Related	4.1 Academic Offices	5	5	97
		4.2 Research Office	1	1	13
		4.3 - Graduate Student Office	3	9	45
		4.5 - Office Support Space	6		18
			15	**15**	**173**
FA – 720 Spadina Avenue	4 - Academic Office & Related	4.1 Academic Offices	9	7	84
		4.5 - Office Support Space	9		65
	10 - Administrative Office And Related	10.1 - Central Administrative	1		9

	Space	Offices			
			19	**7**	**158**
FKPE TOTAL					**331**

Additional administrative, faculty and student space will be freed up within the Warren Stevens and Clara Benson buildings, totalling 877 nasm, to be repurposed into staff and program space. The faculty will be undergoing a Master Planning exercise to determine the best use for these spaces as required for research initiatives.

Building Code / Name	**Space Category**	**COU Category Code**	**Rooms**	**Seats / Stations**	**Area (NASMS)**
BN - Clara Benson Building	1 - Classroom Facilities	1.2 - Non-Tiered Classrooms	2	16	33
	2.0 - Laboratory - Undergraduate	2.3 - Undergraduate Lab Support Space	1	1	15
	4 - Academic Office & Related	4.1 Academic Offices	13	15	171
		4.2 Research Office	2	6	26
		4.3 - Graduate Student Office	6	24	124
		4.4 - Departmental Administrative & Support Staff Offices	2	3	25
		4.5 - Office Support Space	5		33
	6.0 – Recreation/ Athletic Space	6.3 - Athletic Service Space	3		47
	10 - Administrative Office And Related Space	10.1 - Central Administrative Offices	1	1	5
			35	**65**	**481**
WS - Warren Stevens Building	1 - Classroom Facilities	1.2 - Non-Tiered Classrooms	1	7	12
	4 - Academic Office & Related	4.1 Academic Offices	4	3	53
		4.4 - Departmental Administrative & Support Staff Offices	6	7	75
		4.5 - Office Support Space	2	1	24
	10 - Administrative Office And Related Space	10.1 - Central Administrative Offices	12	16	167
		10.2 - Central Admin Office Support	4	10	66
			29	**44**	**396**
FKPE TOTAL					**877**

Munk School of Global Affairs & Public Policy

The Munk School of Global Affairs & Public Policy, including its various centres, initiatives, labs and programs, occupies 3,208 nasms of space at its building at 315 Bloor Street West and at OISE, 252 Bloor Street West. In addition, following the merger with the School of Public Policy & Governance in 2018, the School has faculty, staff, student space and classrooms in the Canadiana Gallery on Queen's Park Circle. It is assumed that all occupants from Canadiana would relocate to the Tower or 315 Bloor St and 1 Devonshire. Some occupants of the Tower will also be relocated from 1 Devonshire Place and 315 Bloor St. The Munk space at OISE, along with the Munk student space (category 11) space at University College will be vacating.

Building Code / Name	Space Category	COU Category Code	Rooms	Seat Capacity / Stations	Area (NASMS)
MK – 315 Bloor Street West	1 - Classroom Facilities				111
	4 - Academic Office & Related				
					760
	11 - Non-Library Study Space	11.1 - Structured Formal Study Space			97
OI - 252 Bloor Street West	4 - Academic Office & Related	4.2 Research Office	7	19	100
1 Devonshire Pace	4 - Academic Office & Related				1144
	11 - Non-Library Study Space				84
Canadiana Building	1 - Classroom Facilities				232
	4 - Academic Office & Related				401
	11 - Non-Library Study Space				59
University College	1 - Classroom Facilities				153
	11 - Non-Library Study Space				51
	19-Other (inactive)				16
TOTAL					**3208**

Masters of Mathematical Finance Program – A&S

For the past ten years, the Master of Mathematical Finance program has occupied 232 nasms of leased space at 720 Spadina. There is one classroom, along with administrative and support offices, and one office for graduate students. Although centrally located, the space is no longer feasible for this program. The current location and space presents branding issues and technological limitations.

The space listed below will be vacated.

Building Code / Name	Space Category	COU Category Code	Rooms	Seat Capacity / Stations	Area (NASMS)
FA - Spadina Avenue-720	1 - Classroom Facilities		1	0	60
	4 - Academic Office & Related	4.3 - Graduate Student Office	1	15	67
		4.4 - Departmental Administrative & Support Staff Offices	4	5	51
		4.5 - Office Support Space	4	5	54
TOTAL			**10**	**25**	**232**

Space Requirements

Rotman Executive program

The Rotman spaces should take advantage of views of the city and offer as much natural light as possible. Each classroom floor should be contained to include classroom, break-out and lounge space so the participant does not have to travel far as they transition between activities. The top floor of the tower will have the dining facility which will again have views of the city, and will be multi-functional for dining as well as event activities.

The facility needs to include the following:

- Two classrooms (seat 60 each or dividable to 2 @ 30 each) with reconfigurable desks, loose comfortable seating and adjacent coat rooms and storage space. Dividing these spaces is highly desirable to maximize room booking efficiency.
- One flat classroom (seat 45-50 each) with reconfigurable desks , temporary loose comfortable seating, with adjacent coat rooms and storage space
- It is imperative the "classrooms" be considered as flexible as possible to accommodate new type of learning structures that encourage collaboration among participants and create community. Rooms should facilitate networking, co-learning, and interaction among learners
- 20 fully equipped breakout rooms in proximity to classrooms, each with a capacity to seat 8 participants
- Classroom support offices, highly visible and accessible to program participants, which include hoteling offices for academic program directors and workstations for program coordinators and printing facility
- Participant lounges in close proximity to classrooms, designed to be comfortable, congenial spaces allowing for networking and informal participant interactions, and to include wifi or private cubicles to support the clients' need to stay connected to their offices during breaks; and including perpetual coffee break stations with hot and cold beverages and healthy snacks available at all times.
- Secure front reception area and foyer as an entry point to the facility, with comfortable seating, marketing material display space, etc, to include reception staff and concierge service
- A full service kitchen (45 nasms) for use by catering staff to supply fresh, healthy food for all meals and breaks; additional office space for catering staff
- A dining facility (60 seats) for program participant meals or use for special functions; Ideally adjacent to the 50 seat classroom with a dividing wall to open up for larger events.
- An open connecting stair to link participant floors with the dining floor and allow travel between floors by stairs reducing elevator dependency.
- Reasonably sized offices and work spaces for administrative staff, configured in an efficient way to support teamwork and the sharing of information and resources
- IT Service space to store and house IT equipment (server), telecommunications and security equipment for the facility

- A staff lunchroom/lounge
- A boardroom/video conferencing room with high quality finishes to be used for client meetings;
- Easily accessible storage / workroom space for a large and quickly revolving inventory of office supplies, study and reference materials, branded items etc.;
- A flexible designed research staff floor for a variety of research units to move to the tower

Additional site requirements include:

- Prominent entrance to the building
- Access to nearby parking
- Access to loading dock for catering deliveries.
- Efficient Elevators with control of visitors to the participant floors.
- Facility infrastructure (corridor space, washrooms, elevators) to support large numbers of users requiring support at concentrated times (snack/meal breaks, washroom breaks etc) [typical daily volumes of between 90 and 160 participants, plus additional 40 faculty/staff
- Proximity to Rotman community, preferably on a site that can be considered part of an extended Rotman campus within this precinct of the University campus.

Faculty of Kinesiology and Physical Education

The Faculty of Kinesiology and Physical Education (FKPE) will occupy the 7th and 8th floors of the tower. One floor will be used to house the entire academic administrative team, senior managers and some of the support staff including the Dean, CAO, Directors of Facilities, HR, Finance, IT, PR & Communications, and Advancement.

The administrative hub will require the following:

- Reception with two workstations and waiting area
- Dean's office adjacent to the executive assistant and meeting room
- Two medium sized meeting rooms to accommodate 8-10, and 12 seats
- 4 Executive offices
- 6 Director's offices
- 17 Shared or open offices for IT, Advancement, Communications and Finance
- 4 Small offices for HR where meetings and confidential information may be shared
- Kitchenette with copier and mailboxes. Potential to function as a social lounge with soft seating if space permits.

The second floor will be used by faculty and graduate students. These groups are currently accommodated in the Athletic Centre, leased space at 720 Spadina and 40 Sussex Avenue. By relocating these groups, space released in the Athletic Centre will provide much needed accommodation for the Faculty's growing

research needs. This will also allow the Faculty to decant 40 Sussex Avenue and return the building it uses in the Huron-Sussex neighbourhood to the University for faculty housing.

Spaces to support faculty and graduate research are the following:

- 17 Faculty offices. Through furniture solutions may meet with up to 4 people.
- Graduate offices for approximately 21 PhD students in 7 offices, 3 students per office. Offices that are not occupied should be multi purposed to allow for smaller breakout or interview rooms and should be sized similarly to faculty offices.
- Graduate workstations for up to 45 Masters level graduate students in clusters of 3 neighbourhoods or pods. The three clusters of space should be divided up by other program or creative solutions to reduce sound travel. Furniture solutions will be explored to provide students with writing or display surfaces for impromptu presentations or collaboration.
- Meeting rooms, two rooms of 10 to 15 that could be combined into a larger room for lab use.
- Look at integrating small 4 to 5 person breakout rooms, or if space does not allow for it to use these rooms as PhD or faculty offices as required.
- Waiting area adjacent to elevator if possible or soft seating strategically located to serve this function.
- Lounge space integrated with kitchenette and soft seating. The lounge may serve as a multi-purpose space for organic interaction and inspire conversation.
- Copier closet with storage for supplies, paper, and mailboxes

Munk School of Global Affairs & Public Policy

The Munk School of Global Affairs & Public Policy will occupy 5 floors of the new tower, including the floor adjoining 315 Bloor Street,.

Since the Munk School's 315 Bloor Street West location was refurbished, the size of its professional Master of Global Affairs program has doubled in size, from an initially planned cohort of 40 students to per 80 students per year. Additionally, joint degree programs have been developed with the Faculty of Law and the Rotman School of Management as well as dual degree programs with Sciences Po, the Hertie School and the London School of Economics leading to increases in class sizes and demands on the School's program team in terms of need for office and meeting space. Currently, space for graduate students is limited and the School is challenged to accommodate requests for group study, capstone project space, interviews with prospective internship clients and/or employers and locations for professional development activities.

In addition, the 2018 merger between the Munk School of Global Affairs and the School of Public Policy & Governance has resulted in the addition of the Master of Public Policy (MPP) and the undergraduate public policy major to its slate of programs. The MPP program is similar in size to the MGA (approximately 80 students entering the two-year program annually) and the public policy major includes about 70 students.

The arrival of new director, Michael Sabia, in February 2020 signals a new and ambitious growth phase for the School. Thanks to the extraordinarily generous benefaction of Peter and Melanie Munk, the Munk

School is continuing to expand its faculty complement and roster of Fellows and Visiting Scholars. Additional office space is required to meet these obligations.

There has been significant research activity within the Munk School during the past five years and we anticipate that this activity will increase. New grants have led to requirements for offices to house project staff, research assistants post-doctoral fellows and co-PIs. There is often a requirement that such space be provided as part of the institution's in kind contribution to the project. There is also a corresponding need for meeting space for lab teams and activities. Currently the Munk School has a year-by-year allotment of offices within the OISE building that is serving as swing space until the tower is completed. There are 7 shared and private offices for full-time grant-supported staff as well as a shared space that can be booked by all labs within the Munk School.

Because the School draws extensively on its affiliated faculty for leadership roles and grant activities, there is a need to provide private and shared office space for faculty members for varying terms during their work on these projects. Such arrangements are put in place only when the faculty involved release their office space in their home department for the contract duration.

The School's space plans provides for all the above requirements.

- A core, central open space on the 2nd and 3rd floors of the tower that will be the heart of the School. This will include space for a café/coffee station, casual seating in an atrium-like setting, and provide much-needed graduate student space.

- Two flat classrooms (2nd and 3rd floors) with reconfigurable desks which will also serve as spaces for some of the 300 plus events held annually
- Two 60-seat Active Learning classrooms will be located on the 4th floor of the Tower.

Active Learning Classrooms (ALCs) are designed to support pedagogy encouraging student collaboration and greater engagement between students, the content, and their instructor. To support this goal, ALCs are designed to create the capability for groups of students to work together and to reduce the importance of a central focal point. In contrast to tiered rows of tables facing a lecture/presentation wall, an ALC is often flat-floored and configured with round group tables around a room's perimeter. Typically, ALCs are enhanced by technology, particularly a dedicated screen, laptop hookup and microphone for each table with the ability for an instructor to switch between lecture material and group responses or input. This allows the instructor, for example, to pose a case or problem to small student groups and, later, to engage the entire class in a discussion of the various group responses. While technology does add to the classroom experience, and is required for larger rooms, active learning pedagogies are supported by the group-table configuration alone.

- Student/faculty/visitor lounge and
- Breakout rooms in \ with a capacity to seat 6-10 participants
- Classroom support office
- 25 faculty offices
- 2 senior visitor offices
- 5 administrative/researcher offices
- Shared Post Doctoral Office (12 stations)

- Shared laboratory space for meetings/research activities
- IT Service space to store and house IT equipment (server), telecommunications and security equipment for the facility
- A faculty/staff lunchroom/lounge on 5th and 6th floors

Masters of Mathematical Finance Program – A&S

Administrative Office - Program Coordinator

This office is the location for the staff member responsible for the academic, financial and HR components of the Program. This office should contain standard office furniture along with a sole use printer. This office should also be big enough to hold a conference table for a minimum of 6 people. This will be used for meetings with the Director, staff meetings, faculty and industry partners or visitors to the Program. Due to the sensitive nature of the information attached to the position this space must be secure.

Administrative Office - External Relations Officer

This office is the location of the staff member responsible for internships and career development. This office should contact standard office furniture with room for at least two additional chairs for visitors and/or students.

Administrative Office - IT Manager

This office is the location of the staff member responsible for the IT infrastructure of the Program. This office should contain standard office furniture with sufficient storage space for additional computer equipment, tools and other technical paraphernalia. This equipment must be kept in a secure location.

Administrative Office - Administrative Assistant

This office is the location of the staff member who acts as support to the Program Director, Coordinator and External Relations Officer. This position is also the first point of contact for visitors, delivery people and other community members. This office should contain standard office furniture, a printer to be shared by staff (other than the Coordinator) and seating for at least two visitors.

Administrative Office - Multi-Use

This office would be used by the Program staff to counsel students, meet with visitors, as office space for those visiting professors who teach in theProgram at various times during the year and also for students who, often need a private space to take interviews for internship and employment. This office should contain a desk or table and two chairs.

Conference Room

This space should be equipped with telephone and video conferencing function and should contain furniture to accommodate 25 people. This would be used for curriculum committee meetings, industry advisory committee meetings, conference committee planning meetings and other large group meetings that occur periodically during the academic year.

Classrooms

Two spaces should be large enough to seat 40 students with a teaching station and lectern. The minimum equipment required is: computer, projector, white boards and sound equipment for a microphone. The ideal teaching space is an active learning classroom, as students are often engaged in group work and the standard theatre style classroom is not suitable. Instruction requires a state of the art teaching station that allows for a computer, projector, screen, microphone, internet access etc. White boards are required. Both a classroom and 'lab' are needed, as students, when not in lecture are working on projects and presentations as part of their curriculum. There is no need to 'schedule' the open space as it is restricted to our students only. The learning lab is a space for the current 'lab' space to 'grow into'. The demands of the quantitative finance professional are becoming more and more technical with the advent of machine learning and big data. There is a need to expand the current lab to add more terminals and collaborative work stations so students work effectively. MMF would like to grow to a total of 60 students, possibly in two streams therefore lab and classroom space needs to be sufficient for the increased number of students. In MMF ideal space there are two dedicated classrooms.

Lab

This space will be dedicated to housing the computer terminals containing proprietary software (e.g. Bloomberg) which must have restricted access. This room should contain at least 10 work stations, maintaining the need for collaborative work spaces.

Collaboration/Work Space

This space will be dedicated to students who will use the space to work and study. The nature of the Program requires much project and collaborative work and seating should be selected to allow for individual or group work. The space should be sufficient to seat a minimum of 40 students.

Event Space

This multifunction space will be used for Receptions, Seminars, Industry Presentations and other events and/or meetings that occur during the academic year. The space should be able to accommodate a minimum of 50 in both table and theatre style seating.

Server Room

This space should be large enough to hold necessary servers and switches to maintain the Program's technology and connectivity needs. N.B. due to the sensitivity of this equipment to temperature (especially heat) ventilation and cooling are a necessary component.

Galley Kitchen

This should contain sufficient space for a microwave, sink, small refrigerator, coffee maker and cupboards for supplies related to preparing hot beverages for visitors. This space is intended for staff use only.

Storage

A secure space to hold a minimum of 6 filing cabinets and shelving for paper, office supplies, marketing material, and other equipment. The Program is charged with keeping the official student record along with financial and HR files and this space will be used for archival purposes.

Library

The Program maintains a reference library of texts and other reading material specific to the curriculum and for the use of all students.

Mailboxes

The Program maintains a shelving unit with slots for mail for all students, professors and TAs.

Closet

The Program maintains a closet for the students to hang up coats and leave bags when in the space.

Common Space

The Program maintains a space for students to sit, eat and use as a lounge space when breaks in the timetable allow.

III.Project Description

a) Vision Statement

The proposed Academic Wood Tower will be an iconic, precedent-setting building at a unique site on the St. George campus. Situated between the Munk School of Global Affairs & Public Policy at 315 Bloor Street, and the Goldring Centre for High Performance Sport, the tower will be the first tall wood structure in Ontario. It is intended that the tower become a prototype for the use of mass timber/tall wood both nationally and worldwide. Given the prominent sustainable effort driving the project, the design approach will both reveal this unique timber structure to the street, while also responsibly designing the building envelope to respond to its four unique solar conditions via a passive design strategy. The intent is one that responds specifically to its context, while also delivering the highest energy performance and thermal comfort solution.

The north end of Site 12 offers a strong, highly visible location. A fully glazed façade to the north will showcase a timber structure to great effect along the Bloor St corridor. The ability to expose underside of timber decks along the perimeter will provide an attractive finished ceiling visible from the exterior, with a resulting character evocative of Toronto loft buildings.

The Rotman School intends to make use of a promenade connection to St. George Street between Woodsworth Residence and Woodsworth College for its primary entrance to the Tower. The experience of the arrival to the tower should be inviting, as well offer a transitional experience for the Executive learner from busy work environment through a campus "cloister" experience.

Arrival at the tower should include opportunities for program branding. Lobby finishes should be upgraded and consider clear wayfinding signage and possible digital signage for building occupants to navigate to the correct destination.

b) **Space Program and Functional Plan**

Space programs have been developed using COU standards for the Rotman Executive Program, the Munk School of Global Affairs & Public Policy, the Faculty of Kinesiology and Physical Education, and the Masters of Mathematical Finance program.

The **SUMMARY SPACE PROGRAM** is as follows:

Name	Area (NASM)
Rotman Executive program	1728
Rotman Research Centre	413
Master of Mathematical Finance	432
Faculty of Kinesiology and Physical Education	933
Munk School of Global Affairs & Public Policy	1828
TOTAL	**5334**

The following stacking table shows the allocation of floors:

Floor	FtoF Height Metres	Occupant
15	7.00	Mechanical
14	4.50	Rt Exec
13	4.55	Rt Exec
12	4.55	Rt Exec
11	3.85	Rt Exec
10	3.85	Rt Research
9	3.85	MMF
8	3.85	FKPE
7	3.85	FKPE
6	3.85	Munk
5	4.25	Munk
4	6.65	Munk
3	4.55	Munk
2	5.44	Munk
1	7.16	Service Bay

Space Program

ROTMAN EXECUTIVE PROGRAM	Qty	Nasm per	Total
Adminstrative Offices			
Senior Team			
Executive Director, Executive Programs	1	16	16
Assistant Director Strategic Project	1	11	11
Executive Assistant	1	8	8
Finance and Operations team			
Private Office (Director)	1	11	11
Shared Office	1	16	16
Open Workstations	4	8	32
Sales and Marketing			
Private Office (Director and 2 Learning Advisors)	3	11	33
Open Workstations (or Shared office)	2	8	16
Governance Portfolio			
Private Office (Director and Assist. Director)	2	11	22
Open Workstations	5	8	40
Open Portfolio			
Private Office (Director and Assist. Director)	2	11	22
Open Workstations	3	8	24
Custom Portfolio			
Private Office (Director and Assist. Directors)	1	11	11
Open Workstations	11	8	88
Central Admin Staff			
IT Shared Office	1	16	16
subtotal			366
Office Support			
Main Admin Reception	1	11	11
Waiting	1	10	10
Admin Coat Closet	1	3	3
EP File Storage	1	8	8
Faculty/Staff Lounge / Kitchenette	1	15	15
IT Comm Room	2	12	24
IT Control room	1	12	12
Admin Support Workroom/ Supplies	1	20	20
Meeting Space			
Board Room/ Video Conference Room	1	35	35

subtotal			138
Classroom			
Flat Floor Classroom (Capacity 60 Each or divided for 2@30)	2	190	380
Flat Floor Classroom (Capacity 48)	1	145	145
Break-out Rooms	20	17	330
subtotal			855
Clasroom Support			
Reception/ Concierge desk (dining floor)	1	10	10
Coat Room	4	5	20
Dining Room (seating for 60)	1	125	125
Main Kitchen	1	50	50
Podium/ stage	0	20	0
Delivery Pod	2	12	24
Academic Office	2	12	24
Snack/ Servery	2	10	20
Student Lounge	2	25	50
AV Closet	2	3	6
Furniture Storage	2	20	40
subtotal			369
Executive Programs Total			1728
ROTMAN RESEARCH CENTRES AND INITATIVES			
Research Centre 1			
Academic Director 's Office	1	16	16
Managing Director's Office	1	16	16
Research Associates /Post Doc Offices (shared)	1	16	16
Visiting Researchers/Fellows	1	11	11
Research Assistants Workroom / shared office	1	16	16
Research Centre 2			
Academic Director 's Office	1	16	16
Managing Director's Office	1	16	16
Research Associates /Post Doc Offices (shared)	1	16	16
Visiting Researchers/Fellows	1	11	11
Research Assistants Workroom / shared office	1	16	16
Research Centre 3			
Academic Director 's Office	1	16	16
Managing Director's Office	1	16	16
Research Associates /Post Doc Offices (shared)	1	16	16
Visiting Researchers/Fellows	1	11	11
Research Assistants Workroom / shared office	1	16	16

Shared Research Centre space			
Admin Reception Desk/ Waiting	1	20	20
Meeting Room for 10-12	1	28	28
Large Open research Assistant workspace	1	120	120
Research Data Centre	1	20	20
Research Total			**413**
Total Overall - Executive Programs and Research Centres			**2141**

FKPE			
FKPE Administrative and Staff Offices	**Qty**	**Nasm per**	**nasm**
Dean's Office - adjacent to Exec Assistant	1	18	18
Dean's Ensuite washroom	1	5	5
Reception Area (2 workstations)	1	11	11
Small waiting area outide of Dean's office for guests	1	11	11
Meeting Room (8-10)	1	20	20
Meeting Room (12)	1	24	24
Executive Offices	4	15	60
Director's Offices	6	11	66
Space for Kitchem, Photocopier, mailboxes	1	10	10
Shared Office, IT	7	5.5	38.5
Storage, IT	1	14	14
Shared Office, Advancement	3	5.5	16.5
Shared Office, Communications	3	5.5	16.5
Shared Office, Finance	4	5.5	22
Small Private offices, HR	4	11	44
FKPE Faculty and Graduate Offices			
Waiting Area	1	10	10
Faculty Offices	17	11	187
Meeting Room (10-15)	2	20	40
Lab or as part of Meeting Rooms*	*1*	*40*	*40*
Kitchenette and Lounge	1	15	15
Photocopier, Mailboxes	1	8	8
Shared Office, Graduate	45	3	135
Shared Office, PhD Students	7	11	77
Breakout Rooms (4) or as part of Share Office, PhD Students*	*4*	*11*	*44*
Waiting Area	1	10	10
FKPE TOTAL			**933**

MUNK SCHOOL OF GLOBAL AFFAIRS & PUBLIC POLICY			
2nd Floor			
Classroom	1	125	125
Common Space	1	160	160
Coffee Bar/Servery	1	25	25
3rd Floor			
Classroom	1	175	175
Common Space	1	60	60
4th Floor			
Active Learning Classroom – 60 seat	2	180	360
Classroom furniture storage	1	20	20
5th Floor			
Flexible Open Work Space	1	180	180
Program Space	2	30	60
Faculty Offices	11	11	121
Storage	2	5	10
Kitchen/Lounge	1	30	30
6th Floor			
REACH Lab Office Multi	1	26	26
Research Office Multi	1	15	15
REACH Lab Office Multi	1	15	15
Faculty Lab	4	11	44
Staff Offices	7	11	77
Meeting Room	1	20	20
Kitchenette/Lunch	1	15	15
Photocopy/Supplies	1	8	8
Storage	1	8	8
Reception/Waiting area	1	10	10
Faculty Offices	13	11	143
Open Hotelling/Collaborative	1	45	45
MUNK TOTAL			**1828**

MASTER OF MATHEMATICAL FINANCE			
Program Coordinator office	1	18	18
Shared office	1	24	24
Reception/Waiting Area	1	20	20

Meeting rooms	6	11	66
Storage	2	8	16
Secure Storage	1	8	8
Staff Lounge/Lunch/Kitchenette	1	10	10
Computer Lab	1	30	30
Graduate Student Collaborative Area	1	120	120
Classroom, student and administration spaces	1	120	120
MMF TOTAL			**432**

TOTAL SPACE PROGRAM			**5334**

Non-assignable space

Included in the building project are non-assignable elements that are not specifically described in the Space Program, but will be part of the architect's responsibility for design.

Non-assignable spaces include: lobbies, corridors, stairs, mechanical stacks etc. These areas are to be made as efficient as possible, without compromising design excellence, building functionality and student, staff and faculty experience. Specific requirements include:

- Corridors, stairs, ramps, and public circulation space
- Security closet
- Data & communication closets: one on every other floor, possibly combined with electrical closets
- Mechanical and Electrical rooms are existing and located in the basement
- Janitor's closet – there is 1 closet per floor. The ground floor and basement level closets should be at least 2.5 x 6.0m in size to store custodial carts, supplies, equipment, storage shelves, and should include a slop sink and dedicated outlets for recharging equipment. Upper level closets should include a slop sink and storage.
- Janitor change room
- Washrooms: All washrooms in the building are gender neutral. Universal washrooms are provided approximately every other floor and comply with current AODA standards.
- Elevators: 3 elevators are proposed to access all levels, two passenger and one freight-sized.

c) **Building Considerations**

Tall Wood Background

The use of mass timber products for buildings greater than 6 storeys in height represents a significant challenge to the traditional use of concrete and steel for such structures. Much of the impetus for tall

wood buildings is environmental: wood is also a renewable resource, and it is the only major building material with that distinction. In addition, mass timber construction can contribute to carbon dioxide reductions by sequestering carbon; its production also results in reduced carbon emissions compared to the manufacture of steel. Canada has one of the world's largest forest industries, and this project will be an opportunity to showcase Canadian technological advancement in wood products.

In addition, wood is a biophilic material. Studies that have been undertaken at UBC of visible timber surfaces in buildings and their impact on inhabitants have noted quantifiable positive psychological effects on occupant wellness through reductions in stress responses.

In Canada, UBC has just completed the Brock Commons, a tall wood residence building, reaching 53m in height. The Academic Wood Tower will surpass this height by 18m, making it the tallest in North America.

Cladding

The Site 12 Tower structural design anticipates the use of lightweight cladding systems. A screening material controls solar gain on the south elevation. The exact material and colour is yet to be determined, but could be similar to the Goldring Centre or a new complementary shade. This approach imagines a layered palette of finishes that would be responsive to changing light in different seasons and times of day, offering a dynamic variation in experience.

Tower Height

The tower is planned for a total height of 77.0m, which includes a required mechanical penthouse and roof parapet.

The tower as currently programmed has two distinct program types, with different requirements for floor-to-floor height. Academic office floors are 3850 mm apart. Classroom floors are 4550 mm apart. The additional height at classroom levels is required for structural reasons; the deeper beams can avoid using columns within the classroom space, as well as providing taller ceiling heights desirable for classroom functions.

Deeper timber beams can be accommodated within the planned classroom floor height. However, to maintain ceiling clearances with timber beams the office floor height increases (in comparison to a steel structure) by 350mm, from 3850 mm to 4200 mm. This increase affects six floors, for an overall increase in height of 2100 mm. Increasing the building height has the effect of increasing overturning forces that have to be resisted by the structure, as well as increasing the height limit as proposed to the City to date. To limit this effect the overall increase in height has been offset by a reduction in height at Level 4 and current programming at Level 10 by the Rotman Executive Education Group is office use, not classrooms as originally anticipated. As a result, the increase in building height is limited to a modest 700 mm overall (in comparison to a steel structure), an amount which can be accommodated by the structural design.

Effect on Space Planning

Overall, switching from steel to timber structural systems has only a limited impact on space planning, primarily affecting office floors (levels 5 through 10). While there are some slight area losses to the 'open

office's spaces due to the need for additional interior columns, the 'superbrace' approach provides for significant area gains by eliminating perimeter braces in two out of three perimeter offices. On balance the timber 'superbrace' option provides a preferred space planning yield.

Fireproofing

For a tall building, the Ontario Building Code requires that structural elements supporting occupied floors have a two hour fire resistance rating. In a steel building, this resistance can be provided by spray-applied fireproofing material or by encasing in fire resistant drywall. Both of these approaches conceal the structure from view, limiting the contribution of structure to the building's architectural character. In addition, spray-applied material does not provide an architecturally finished surface and is therefore typically encased in non-fire-resistant drywall. An alternative is to paint any steel structure that will be exposed to view with a protective intumescent paint. As well as allowing structural elements to be placed on view, this approach preserves the most floor area and is the reference for space planning.

Mass timber has inherent fire-resistive abilities. Heavy timber sections are slow to burn, forming a layer of protective char at a consistent rate. An understanding of this rate of char allows the residual strength of a structural member to be calculated following the two-hour period required by code. In the proposed designs, floor decks and beams are of sufficient size and thickness to not require additional fire protection and can be left exposed to view. Similarly, any column or brace larger than 400x400mm does not need additional protection. Smaller timber columns and braces would need to be protected, either by encasement in drywall or by increasing them in size to 400x400mm. In this study however in order to allow for as much exposed wood structure as possible, all visible wood column elements and braces within are therefore designed to be no smaller than 400x400mm. This slight cost premium is captured within the wood structure cost estimates.

Alternative Solutions for an all wood structure, elevator and stair core were presented to the City Building Department for review and approval by Toronto Building & Construction and Toronto Fire. The City has requested that the fire egress stairs shafts be constructed out of non combustible materials. Two options are being contemplated out of steel with an alternative aesthetic. The first and preferred option will be to revise the stair shafts out of steel and maintain the original intent of the project with a wood elevator core. The second will be an all steel stair and elevator core.

Columns

The north floor plate has an intermediate line of columns in both steel and timber designs at office floors. In the steel design this line of columns is concealed within the north wall of a washroom and service zone, leaving an 11.5m wide clear floor plate, which can accommodate a mix of open and private offices. Achieving the same 11.5m span with deeper timber beams reduces the available ceiling height excessively, even accounting for the proposed increased from 3850 to 4200 mm floor-to-floor. In order to avoid this reduced ceiling height, the proposed timber design instead moves the intermediate column line into the circulation zone between open and private offices thus reducing the span and depth of the beams and increasing the clearance height to the underside of the beams. To accommodate this line of columns the open offices are reduced in size marginally from 8 nasm to 7.5 nasm each. A smaller number of open offices could alternatively be provided at 8 nasm each. The private offices are not impacted by the moved column line.

Classroom floors have sufficient height in both steel and timber designs to achieve clear spans without intermediate columns, and are not impacted by a change from steel to timber structure. Column sizes vary, increasing in size at lower floors. At perimeter and intermediate locations, where they will appear in occupied spaces, they average 300x300 in both steel and in timber designs. Timber columns gain inherent fire resistance at 400x400mm. Adding drywall fire protection to steel or timber columns increases their size to approximately 400x400. As a result, the change in column material from steel to timber has minimal impact on space planning.

Braces

Diagonal braces between columns provide lateral stability for the tower and vary in dimension. Around the perimeter of the tower, where diagonal braces appear within rooms adjacent to exterior glazing, they range from 200x200 to 300x300 in size, excluding fire protection. Timber braces in these locations are of broadly comparable size, which means they are too small to have an inherent two hour fire resistance, and would need to be encased in drywall to provide the required protection.

An alternative approach which allows timber braces to be exposed to view is to increase them in size to the minimum size that has a two hour fire resistance. With either method (encasement in drywall or increase to 400x400), the timber brace is 100mm wider than the equivalent steel brace, with a corresponding marginal reduction in floor space at perimeter rooms.

The 'superbrace' timber scheme uses braces that are inherently fire resistant, sized from 400x400 and up. In this scheme braces appear in only two of six bays along the north and south faces, resulting in an increase in usable floor space for perimeter spaces on all levels. This is a planning improvement over the steel structure and mitigates area losses as a result of the additional interior columns.

Envelope Attachment and Details

The proposed glulam floor decks with concrete topping offer a number of possible methods for exterior envelope connection details. In general, connection methods are similar to those used with other monolithic slab materials such as cast-in-place concrete.

Curtain wall anchors may be bolted to inset Halfen mounting channels. This method provides adjustability in three directions. The channels can be factory installed which eliminates difficult on-site welding of envelope connections Alternate approaches include welding to the slab edge pour-stop angle, or by site-installed anchors face fixed to top of slab and concealed beneath concrete topping.

Mechanical/ Electrical

The 2014 Academic Wood Tower planning/feasibility study proposed a chilled beam system with a small mechanical room, which helped to maximise usable floor area. This type of equipment was assumed to be used within a suspended ceiling system. With a mass timber approach, the glulam timber structural decks and beams invite consideration of an exposed ceiling. Exposed mechanical equipment typically incurs a cost premium, as well as additional coordination during design and construction. This cost might be offset by a reduction in applied ceiling finishes. The glulam timber structure will be partially exposed along the north perimeter, and a suspended ceiling or wood slat ceiling towards the interior of the space where mechanical and electrical is planned.

Timber also has benefits of improved thermal mass and humidity control, compared to steel framing. These benefits may contribute to efficiencies in subsequent mechanical system design and improvements to interior environmental quality.

Accessibility

The University is committed to equitable access to all of the building's facilities. This is informed by the University's institutional Statement of Commitment Regarding Persons with Disabilities, as well as the obligations that fall under the Accessibility for Ontarians with Disabilities Act (AODA) and the Ontario Building Code. Additional enhanced criteria includes: equipment such as visual alarms and power door operators; and clearance for mobility devices resulting in wider door widths, turning radius, and path of travel. All washrooms in the Academic Wood Tower will be gender neutral.

Personal safety and security

The public lobby should remain open and accessible during regular operating hours as well as for scheduled after-hour events. Security on each floor is anticipated but individual needs and requirements will be defined during project implementation. At a minimum, access control should be supplied at both sides of the lobby entrance, as well as each elevator.

Exterior lighting should be abundant and provide for ease of movement around the exterior of the building at all times of the day.

The public currently accesses the 4th floor of the Goldring Centre via the north side lobby and its existing elevator. The elevator only provides access to the 4th floor; all other floors are accessed with a fob. This is to keep the 3rd, 2nd, 1st, and basement levels restricted only to those with access privileges. With the construction of the tower, a plan must be developed to manage this access, primarily determining how members of the public reach the Sport Med clinic or the researchers/faculty members.

Servicing (including garbage and recycling, deliveries)

All servicing will be accommodated in the existing service bay at the base of the tower. Constructed at the same time as the Goldring project, this enclosed facility anticipated the servicing requirements of the tower. The shared facility also serves the Goldring Centre, the Munk School of Global Affairs & Public Policy at the Observatory, Woodsworth College and Woodsworth College Residence.

Elevators

There will be three elevators in the building, two passenger and one freight-sized. The freight-sized elevator is in use and serves the Goldring Centre. An elevator report was prepared by Soberman Engineering to examine wait time scenarios. For university type buildings, an Average Waiting Time of approximately 35 seconds or less would be considered acceptable. The analysis suggested that wait times at the Academic Wood Tower could be reasonable, but all occupancy beyond that already identified for classrooms should be an office type. An additional load of students moving up and through the building throughout the day would cause elevator wait times to increase to a point beyond an acceptable wait.

Signage and donor recognition

Exterior and interior signage will be a required element of the detailed project design for building identification and wayfinding purposes. This will be developed through the construction documents phase.

There will likely be a requirement for donor recognition, and its accommodation must be appropriately integrated within the building. The building design should consider the provision of opportunities for creative donor recognition of various types.

Sustainability design and energy conservation

Integration of environmentally sustainable principles into buildings, landscapes and transportation options, has been a high priority in discussions with both campus and neighbouring communities. At a minimum, all new buildings shall be designed to meet the Toronto Green Development Standard, Tier 1 and LEED Canada – NC Silver rating with at least 10 points achieved for "Optimizing Energy Performance", 2 points achieved for "Enhanced Commissioning" and 4 points achieved for "Water Use Reduction". This will significantly reduce the building's operating costs over its lifetime. Further, the project must comply with City of Toronto Tier 1.

Please refer to the City of Toronto Green Roof Bylaw No. 583-2009, Chapter 492 for specific green roof requirements.

Sustainable strategies being considered during the design phase include:

- Performance Targets
    - TGSv3T1 (15% better than ASHRAE 90.1-2013+SB10)
    - Leedv4Gold – non certified
    - 40% better than ASHRAE 90.1-2013+SB10
- Building Envelope
    - 60% Window Wall Ratio averaged over all elevations
    - Improved thermal performance with high insulation value (R-25)
    - Low Sun Heat Gain Coefficient Glazing (0.3 on South)
    - Passive Solar Design Strategies taking advantage of orientation:
        - Shallow floorplate to maximize benefits of natural lighting
        - External solar shading on south façade to reduce solar gain
        - Opaque wall cladding on east and west facades to reduce heat gain from low-angle sun
        - Full glazing on north wall to let in diffuse daylight to reduce lighting loads.
    - Wood Structure
        - Low Carbon footprint (low embodied energy and carbon sequestration)
        - Improved occupant well-being through natural aesthetics and thermal comfort through passive humidity control from wood
    - Green Roof Expansion on the fourth floor of Goldring Centre
- Mechanical
    - Heat Recovery and efficient systems
    - Demand Controlled Ventilation (DCV)

    - Low flow fixtures
    - Connection to the University's Central Steam Plant
- Electrical
    - LED Lighting
    - Daylighting and Occupancy Sensor Control
    - Photovoltaic Panel Ready – Separate project following the completion of AWT

As of 2016, UofT proposed the following Design Standards for Energy Efficiency for New Construction: Capital projects must meet Ashrae 90.1-2013 + 20% at a minimum. Projects are required to add components which have payback of less than 15 years to reach an Ashrae 90.1-2013 + 40%. This project will achieve the 40% target.

ASHRAE provides Standards for all components within buildings – HVAC, windows, lighting, modeling, envelope, ventilation and reviewed by industry experts. It allows for prescriptive and performance based compliance paths to meet the minimum energy use. Toronto Green Standards (TGS), Ontario Building Code (OBC) and LEED use ASHRAE 90.1 to define their energy efficiency standards.

Building energy performance modeling during the design of a new building shall serve several purposes. The primary objective is to inform design decisions in a way that guides the designs toward the University's goals of sustainable energy efficiency, reduced carbon footprint and optimal long term building performance and comfort. It is recognized that the detail and resolution of the performance assessment through modeling will refine as the design progresses from concept through design development to tendering and then on-going measurement and verification.

Energy modeling coupled with Life Cycle Cost Analyses will serve as tools throughout the design phases to evaluate design options and make appropriate choices that support the University of Toronto's pursuit of sustainable reduced energy use and lower carbon footprint with long term built space comfort.

At each design phase model submission, the *Project Consultant Team* will be expected to submit the energy model with EUI's to test the energy performance for alignment with U of T Policy and standards. Please see Appendix 2 for UofT's Energy Modeling Guidelines.

The four sides of the tower will experience different heating and cooling loads depending on the season. Conventionally, these differential loads are accounted for in the design of the mechanical systems. An alternative approach is to consider each face of the building in accordance with its solar orientation.

The Site 12 tower has the advantage of a relatively shallow floor plate. This allows adequate daylighting to be provided by glazing on just two sides, in this case north and south. Area of opaque wall at the east and west facades provide high insulation value and limit solar gain. Limited openings on the east and west sides correspond to areas with office use, while classroom floors are lit entirely from the north and south.

Environmental Health and Safety

The University of Toronto's Environmental Health and Safety office, including an Environmental Protection Services team, provides a broad range of health and safety services to the University community and whose responsibility it is to ensure environmentally responsible, safe and healthy work, research and study environments on campus. Please refer to their website for information, https://ehs.utoronto.ca/.

Key considerations for healthy environments include: office and student space design, use of materials, air quality, access to natural light, and overall space and furniture design.

d) **Site Considerations**

Site context

The site is located on the west side of Devonshire Place, south of Bloor Street, between the Munk School of Global Affairs & Public Policy at the Observatory at 315 Bloor Street West and the newly constructed Goldring Centre for High Performance Sport at 100 Devonshire Place. St. Hilda's College is located to the south. In preparation for the Academic Wood Tower, its foundations were constructed as a part of the Goldring project, as well as a servicing/loading bay at the ground level.

Renovations to 315 Bloor Street West, including the addition of an accessible entrance and elevator core, were completed in 2011 to accommodate expansion for the Munk School of Global Affairs & Public Policy. The building received a heritage designation through this process. The Academic Wood Tower will provide connections to 315 Bloor West, through the new addition.

Two urban design guideline studies, completed over the last 10 years, are relevant to the site: in 2007, the City of Toronto initiated a visioning study for the Bloor Corridor, which has provided recommendations and urban design guidelines for development in this area. The St. George Campus Master Plan: Northeast Sectoralso set out key planning principles that will be important to consider in the development of the site. Principles are identified under massing, sustainable environment, public realm, land use, accessibility, heritage preservation and balanced intensification, and are in alignment with the overall Master Plan principles.

Zoning regulations

The previous zoning for the site dated to 1997, whereby permissions were granted for a 28m high building, spread over the bulk of the site. In 2012, as part of the Goldring approval process, a minor variance was granted to allow for some slight modifications to the approved building envelope. The 28m maximum height remains in force for the site.

Zoning permission was secured through City Council for a total height of 75m (81 metres including mechanical penthouse) in July 2019, with development engineering conditions to be met as outlined in the Final Staff Report. The height has been further reduced to 71m (77m including mechanical penthouse) due to the removal of a raised floor system during design revisions. The Site Plan Application was submitted in May 2020.

Master Plan

The 2011 University of Toronto Master Plan envisioned the siting of a tower at the north end; at this stage, design for the Goldring Centre was well underway. The calculations for the site envelope included the program assumptions for this facility. The height for the tower at the north end was determined by referencing existing building heights along the Bloor Street corridor, as well as those envisioned in the City's Bloor Corridor study.

The strategies and proposals in the Master Plan were subsequently refined and developed into a new approach to development, culminating in an application for a new Secondary Plan. Moving away from pre-determined, site-specific development, the proposed new Secondary Plan recognizes the importance of providing flexibility to respond to changing programmatic requirements for institutional space, while also providing certainty to where and how change is accommodated. The University submitted the application to the City of Toronto in September 2016; it is currently under review.

The new Secondary Plan defines Character Sub-Area within the campus; the Academic Wood Tower lies within the "North Campus". This area is characterized by its interface with Bloor Street and the city at large. Attributes of the sub-area include: the adaptive reuse of historic buildings and infilling of properties, rather than site clearance; the thoughtful and creative inter-relationships between old and new (buildings, green space, public space, etc.); the street orientation of the properties; the role of the streets as an interface between University and the city; and the shared use of the streets by both the University community and broader public.

The new Secondary Plan also identified a number of potential "shared streets" on campus, one of which is Devonshire Place. A 'shared street" is one where vehicular travel may still be accommodated while pedestrians safely enjoy greater access to the right of way. These streets may be transformed using approaches that encompass the full "shared-street" spectrum: from enhanced two-way streets with special paving, to one-way configurations for vehicles, to fully-pedestrian streets that only accommodate service and emergency vehicles. Specifically, Devonshire Place should promote pedestrian activity and be designed to host temporary events including spectator seating for sporting events at Varsity Stadium.

Use Assumptions

14-floor institutional use tower

Landscape and open space requirements

This project will provide access to the roof of Goldring, introducing a new rooftop amenity for events and casual use. While the majority of the existing landscaping will remain, improvements will be made, particularly along the west connection from St. George, at the south end of Woodsworth College Residence

Site access

Vehicular access to the site is off Devonshire Place, through the existing servicing bay. The existing lobby has both east and west entrance doors, facilitating a pedestrian mid-block connection from St. George to Devonshire. The facility can also be accessed from north-south lane extension that runs between St. George and Devonshire.

The Goldring Centre hosts a large number of sport and conference events, as does the Varsity Centre across the street. Traffic and parking considerations for guests as well as participants in these events (e.g., coach buses) will need to be addressed.

A significant number of visitors and occupants of the Goldring Centre are cyclists, and access to bicycle parking and routes should be maintained.

Heritage status

315 Bloor Street West is a designated heritage building. While the Academic Wood Tower is separate and distinct, a connection to 315 Bloor is expected at its south (rear) side. The composition of the new tower, 315 Bloor and the Goldring Centre for High Performance Sport has been carefully considered.

A full list of heritage attributes have been identified for 315 Bloor. The south façade is not listed as a heritage attribute, and the tower is set back from the south elevation.

Wayfinding

Given the number of different occupants in the building, a coherent wayfinding strategy will need to be developed, especially within the lobby. Those accessing the first 2-3 floors should be encouraged to walk, rather than rely on the elevators. In addition, directions for clients of the Sport Medicine Clinic and research subjects making their way to the Goldring 4th floor will need to be placed in strategic locations.

Soil conditions

The base of the Academic Wood Tower has been constructed, so no soil analysis is required.

Demolition of existing structures

No major demolition will occur during construction, however the existing stair tower on the south side of 315 Bloor Street will require openings for connection to the new building.

Site servicing; existing and proposed

The existing site servicing facility must remain in operation throughout construction. This facility serves the Goldring Centre, the Munk School of Global Affairs & Public Policy at the Observatory, Woodsworth College and Woodsworth College residence. Access to the front and rear of the facility should be maintained, or alternate arrangements must be put in place.

e) **Campus Infrastructure Considerations**

During construction of the Goldring Centre, many provisions were made for space and access for the future installation of equipment. A lift out access panel has been installed in the Devonshire sidewalk to enable all mechanical equipment to be installed during construction.

Devonshire Bloor Infrastructure Upgrade

Planned infrastructure upgrades along the laneway between St. George Street and Devonshire Place are required to service the Academic Wood Tower and other known projects in the vicinity. The construction of an underground utility trench will increase heating and cooling capacity to the precinct. A new trench is being installed between Woodsworth and Rotman Commerce carrying steam, chilled water, power, and

data to achieve the increased capacity. For known future projects the installation of a valve box that branches off of the main new trench will provide connections for steam and chilled water.

Electrical

The following provisions were made in the main electrical room (at the basement level of the Academic Wood Tower) for the following future equipment:

- Two additional medium voltage load break switchgear cells. The current design includes the bus extension provisions to add these additional cells in the future.
- Two medium voltage transformers that would each be rated at handling a 100% of the tower. The transformers would be feeding a double-ended switchboard.

The future electrical distribution riser for the tower has been designed to be routed in a chase between the elevator core and the CACF room. Due to the very small floor plate of the tower, it has been assumed that power and data for each tower floor would be fed from alternating communication and electrical rooms.

A large new generator will be installed in the top of the tower and it will be sized to handle the emergency load for the entire complex, including back feeding the emergency load for the Goldring Centre. The new generator will replace the generator that is currently mounted on the roof of Goldring; the existing is currently sized only for existing emergency loads.

Cooling

The Academic Wood Tower will be served by a cooling tower located on the roof of the tower. An outdoor air handler located on the roof of the building will supply outdoor air down to an on-floor compartment unit located on each floor. The compartment unit will be located outside of the building core.

Space provision has allowed for two 250 ton chillers and pumps to serve the Academic Wood Tower and any other buildings that would be connected to this “central plant”.

Water

Future sanitary and general exhaust duct risers will be located outside of the building core. The existing piping up in the shared core has been sized for the Goldring Centre. The piping for the Academic Wood Tower will be run up separately to serve the upper levels of the tower. Consideration should be given to upsizing the piping to be able to serve both the Goldring Centre and the Academic Wood Tower.

Piping will include:

a) condenser water supply and return
b) chilled water supply and return
c) heating water supply and return
d) Domestic cold water

e) Domestic hot water
f) Domestic hot water return
g) Standpipe
h) Sprinkler system
i) Sanitary drain
j) Storm drain
k) Steam
l) Condensate

Sewer and Storm Water Management

The existing storm and sanitary drain connections to the city sewers were sized for both Goldring Centre and the Academic Wood Tower.

Communications and Data

The Goldring Centre is currently outfitted with a VOIP system, with the exception of a few emergency lines servicing the elevators, fire panel, and the front reception counter. The Academic Wood Tower will also employ a VOIP system, as this is becoming the University standard.

The Devonshire Bloor Infrastructure Upgrade project will provide ITS conduit and cabling infrastructure from Robarts Library. In addition, Rotman Exec Ed will require conduit infrastructure from 105 St. George to the 11th floor communications closet allowing 72 strand direction connection to their IT network. The cabling will be installed as part of the tower.

Other Systems

To satisfy future high building requirements, the fire alarm control panel will be located in a CACF room in the north core, and will be capable of voice communication. The fire alarm design for the Goldring Centre made provisions for the Academic Wood Tower, but the components required to meet all the requirements of a high building have not been installed. The biggest provision is the future addition of fire fighter handsets at all stairwell exits on a floor. These handsets will have to be installed and wired up when the tower construction goes ahead.

Another requirement for high buildings is that all life-safety emergency feeders are a minimum of 1-hour rated. Currently all the life-safety feeders are fed with un-rated conductors per the building code for low rise buildings. Provisions have been made for all elevators serving floors above grade to be fed from life-safety emergency distribution. The life-safety feeders must be run in concrete to satisfy the 1 hour fire rating required for high buildings.

The fire pump will be sized based on the requirements of the Goldring Centre. Space provisions for a fire pump for the Academic Wood Tower has been provided.

Space provisions for the Academic Wood Tower sprinkler header has been be provided

Roads and pedestrian pathways

The pedestrian pathway from St. George will be re-constructed to serve as the primary entrance to the Tower for Rotman.

Bicycle parking

The University of Toronto has its own bicycle parking bylaw, and is required to provide 850 bicycle parking spaces within the boundaries of the St. George Campus. This requirement is currently exceeded by more than three times (3150 Short-term spaces), thus, according to the by-law additional spaces are not required. The City's Green Standard refers bike parking to the new City zoning bylaw, which is not currently on force within the UofT Secondary Plan Area. So while technically the project is exempt from providing bike parking, the practical need for it remains and enough bike parking should be provided to adequately support the building.

The Academic Wood Tower was envisioned during the construction of Goldring, and bicycle parking spaces were accounted for as part of that project. Twelve long-term bicycle parking spaces are provided for use by both the Goldring Centre and Academic Wood Tower. Short-term outdoor bicycle parking spaces are located at both the east and west entrances to the building.

Fire access

Fire access is off Devonshire Place; the fire panel is existing and in place at the base of the tower.

Impact on other projects in sector

Four major projects are being planned in the vicinity:

1. Devonshire-Bloor Infrastructure Upgrade project will begin construction between the end of August 2020 and January of 2021.
2. Trinity College New Student Residence and Academic Building is a 4 storey building planned for the Parking lot and Trinity lands south of Varsity Stadium.
3. Woodsworth College Academic Building is a 6 storey addition at the rear of Woodsworth College at Kruger Hall for student and academic space including the departments of Criminology and CIRHR. The project will commence following the completion of the Devonshire-Bloor Infrastructure Upgrade project.
4. Rotman Commerce is planning to build a new Academic Building on the lands south of Goldring Centre for Higher Performance Sports following the completion of the Academic Wood Tower and Woodsworth College projects.

Both Woodsworth and Trinity College projects are expected to begin in early 2021, followed shortly by the Academic Wood Tower. Coordination with all other major and minor projects in this area will be required.

f) **Secondary Effects**

Construction staging requirements are to be determined, with the closure of Devonshire Place as a likely outcome. For the construction of Goldring, access along Devonshire Place was closed at Bloor Street on the northern end and at the Varsity Stadium fire route on the southern end. A similar scenario is likely for this project.

No swing space is required as this is new construction, without demolition. There will be impacts on the Munk School of Global Affairs & Public Policy and the Goldring Centre during construction. It is likely the north lobby of the Goldring Centre will be closed for the duration of the construction. As both buildings will be connected to the tower, there will be access restriction to the impacted areas. A strategy for noise will need to be developed by the contractor to ensure minimal disturbance to the occupants of both buildings. In addition, a new, temporary access plan must be developed for the clinic at Goldring, which currently uses the tower lobby.

There is currently no parking on this site; no loss will be incurred.

g) **Schedule**

Please note that the schedule below provisionally assumes construction management as the project delivery method. Other delivery methods and their respective schedule implications continue to be explored to evaluate the most beneficial approach on this project.

The anticipated schedule for the project is as follows:

- March 02, 2018 — CaPS Executive approval to engage consultant to proceed through Design Development
- March 2019 — Completion of 100% Design Development phase
- April 23, 2020 — CaPS Executive in-between meeting approval (for anticipated contribution to GC Wood Agreement)
- October 02, 2020 — Cycle 2 CaPS Executive for full project Governance approval
- December 17, 2020 — Cycle 2 Governing Council Approval
- January - March 2021 — Procurement of Construction Manager (CM) and Design Assist (DA) team
- April - September 2021 — CM pre-construction services, integration of DA teams, completion of early/primary construction or tender packages, early building permits [*1,2,3]
- Fall 2021 — Mobilization and start of Construction [*4]
- Summer 2023 — Building Occupancy

Notes:

1. The procurement of the CM is the critical path of the project schedule.
2. The use of the CM delivery method is anticipated to allow us to fast-track the project and start on site before the completion of the CD phase.
3. Intent is to engage Design Assist for the mass timber and envelope components of the building as early procurement design services, with materials and erection packages assigned to the CM.
4. Start of construction is contingent on receipt of necessary approvals from various authorities having jurisdiction.

IV.Resource Implications

a) Total Project Cost

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

a) construction costs
b) contingencies
c) taxes
d) site service relocates
e) infrastructure upgrades
f) secondary effects
g) demolition
h) landscaping
i) permits and insurance
j) Professional fees, architect, engineer, misc. consultants project management
k) computer and telephone terminations
l) moving and staging
m) furniture and equipment
n) miscellaneous costs [signage, security, other]
o) commissioning
p) escalation

b) Operating Costs

Operating costs for the Academic Wood Tower are anticipated to be $135 per gsm to be determined as part of the apportionment which includes works required for the Devonshire Bloor Utility Trench and occupancy within the building. Operating costs fluctuate year-to-year when reviewed to reflect current pricing and inflationary pressures and the volatility in utility rates. The costs also exclude any capital cost relating to the trench.

c) Funding Sources

The project will be funded by Divisional Reserves, Operating Budget Contribution, Fundraising, Provostial Funds, Government Funding and Borrowing.

APPENDICES:

1. COU Analysis
2. 100% Design Development Plans
3. Room Specification Sheets (on request)

APPENDIX 1: COU Analysis

Space Requirements As Measured By COU Space Standards

DEPARTMENT NAME: Munk School of Global Affairs & Pubic Policy **DATE: 2020**

	Input Measure	Space Factor	Generated Space	Inventory	% I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT					
CLASSROOMS					
Total FTE Students	**496.90**	1.11	0.00	0	
CLASS LABS					
Lab Contact Hours W		0.8	0.00	0.00	
Lab Contact Hours X		0.6	0.00	0.00	
Lab Contact Hours Y		0.5	0.00	0.00	
Lab Contact Hours Z	0.00	0.3	0.00	0.00	
Unclassified					
Total Class Lab	0.00		0.00	0.00	
RESEARCH LABS					
Research Disciplines A		45.0	0.00	0.00	
Research Disciplines B		30.0	0.00	0.00	
Research Disciplines C		20.0	0.00	0.00	
Research Disciplines D		10.0	0.00	0.00	
Research Disciplines E	224.00	1.0	224.00	243.00	108.5
Unclassified					
Total Research	224.00		224.00	243.00	108.5
OFFICE - ACADEMIC					
Total FTE Faculty	39.00	12	600.80	641.3	106.7
Research Appointments	5.00	12	30.00	37.1	123.6
Total FTE Grads	365.00	3	1,095.00	15.2	1.4
Total FTE Non-Acd Staff	32.00	12	482.06	506.1	105.0
Office Service	2,007.00	0.25	501.75	962.5	191.8
Total Academic Office			2,709.61	2,162.2	79.8
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	0.00	12.0	0.00	0.00	
Office Service	0.00	0.5	0.00	0.00	
Total Admin. Office			0.00	0.00	0.0
Total Office - Academic & Administrative			2,709.61	2,162.2	79.8
LIBRARY FACILITIES & CAMPUS STUDY SPACE					
Study (Total FTE Students)	0.00	0.6	0.00	0.00	

Traditional Static Shelving Space		0.005	0.00		
Mobile Compact Shelving		0.004	0.00		
Super High Density		0.0035	0.00		
Total Stack	0.00		0.00	0.00	
Library Support	0.00	0.25	0.00	0.00	
Total Library Facilities & Campus Study Space			0.00	51.85	
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			**2,933.61**	**2,902.17**	**98.9**
OTHER SPACE					
RECREATION / ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	0.00	0.9	0.00		
Total P.E./Athletics			0.00	0.00	
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	0.00	0.015	0.00	0.00	
NON-LIBRARY STUDY SPACE					
Formal study space		0.4		96.30	0
Informal study space		0.4		193.38	0
Total Non-Library Study Space			**0.00**	**289.68**	**0**
STUDENT AND CENTRAL SERVICES					
Total FTE Students	0.00	1.5	0.00	0.00	
SUB-TOTAL: OTHER SPACE			**0.00**	**289.68**	
TOTAL FORMULA AREAS			**2,933.61**	**3,191.85**	**108.8**

Space Requirements As Measured By COU Space Standards

FACULTY NAME: Kinesiology **DATE:** August, 2020

	Input Measure	Space Factor	Generated Space	Inventory	% I / G
TEACHING/RESEARCH/ACADEMIC SUPPORT					
CLASSROOMS					
Total FTE Students	**1,061.00**	**1.11**	**1,177.71**	**538**	**45.7**
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	0.00	0.6	0.00	0.00	
Lab Contact Hours Y	0	0.5	0.00	0.00	
Lab Contact Hours Z	928.00	0.3	464.00	273.21	
Unclassified					
Total Class Lab	**928.00**		**464.00**	**273.21**	**58.9**
RESEARCH LABS					
Research Disciplines A		45.0	0.00	0.00	
Research Disciplines B		30.0	0.00	0.00	
Research Disciplines D	114.00	20.0	2,280.00	1,080.55	
Research Disciplines D		10.0	0.00	0.00	
Research Disciplines E		1.0	0.00	0.00	
Unclassified					
Total Research	**114.00**		**2,280.00**	**1,080.55**	**47.4**
OFFICE - ACADEMIC					
Total FTE Faculty	43.00	12.0	516.00	491.69	95.3
Research Appointments	1.00	12.0	12.00	187.21	1560.1
Total FTE Grads	141.00	3.0	423.00	418.43	98.9
Total FTE Non-Acd Staff	157.00	12.0	1,884.00	358.52	19.0
Office Service	2,835.00	0.25	708.75	306.96	43.3
Total Academic Office			**3,543.75**	**1,762.81**	**49.7**
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	157.00	12.0	1,884.00	1,053.40	
Office Service	1,884.00	0.5	942.00	375.64	
Total Admin. Office			**2,826.00**	**1,429.04**	**50.6**
Total Office - Academic & Administrative			**6,369.75**	**3,191.85**	**50.1**
LIBRARY FACILITIES & CAMPUS STUDY SPACE					
Study (Total FTE Students)	1,061.00	0.6	636.60	0.00	0.0
Traditional Static Shelving Space		0.005	0.00		
Mobile Compact Shelving		0.004	0.00		
Super High Density		0.0035	0.00		
Total Stack	0.00		0.00	0.00	0.0
Library Support	636.60	0.25	159.15	0.00	0.0
Total Library Facilities & Campus Study Space			795.75	0.00	0.0

SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			**11087**	**5084**	**45.9**
OTHER SPACE					
RECREATION / ATHLETICS					
Under 4,000 FTE Enrol.	1,061.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	1,061.00	0.9	954.90		
Total P.E./Athletics			954.90	24,974.73	2615.4
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	0.00	0.015	0.00	0.00	
STUDENT AND CENTRAL SERVICES					
Total FTE Students	1,061.00	1.5	1,591.50	652.71	**41.0**
SUB-TOTAL: OTHER SPACE			**2,546.40**	**25,627.44**	**1006.4**
TOTAL FORMULA AREAS			**13633.61**	**30711.11**	**225.3**

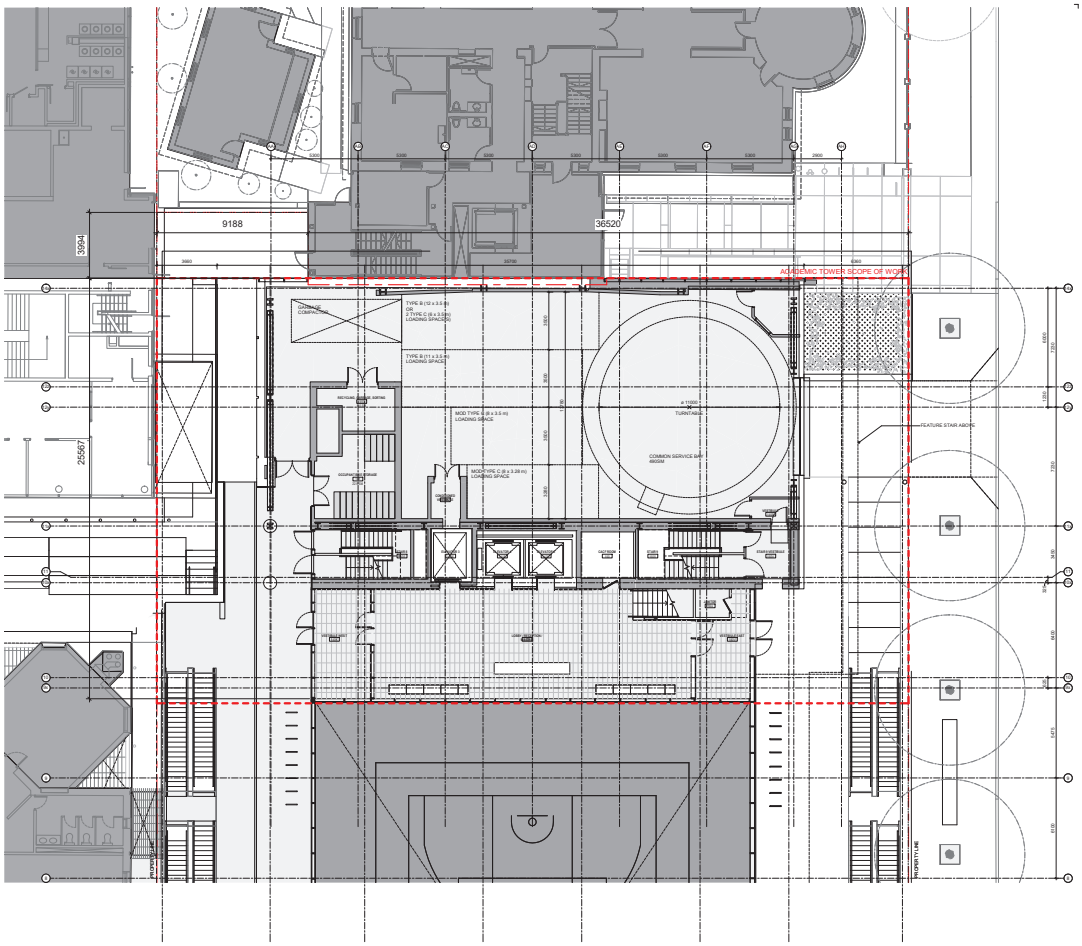
Space Requirements As Measured By COU Space Standards

DEPARTMENT NAME: Mathematical Finance Program **DATE:** Feb. 2016

0		A Input Measure	B Space Factor	C = A × B Generated Space	D Inventory	E = (D/C)× 100 % I / G	F = C - D Shortage / Surplus (-/+)
TEACHING/RESEARCH/ACADEMIC SUPPORT							
	CLASSROOMS						
	Total FTE Students		1.11	0	128	0%	**0**
	CLASS LABS						
	Lab Contact Hours W	0.00	0.8	0.00	0.00	0	0
	Lab Contact Hours X	0.00	0.6	0.00	0.00	0	0
	Lab Contact Hours Y	0.00	0.5	0.00	0.00	0	0
	Lab Contact Hours Z	0.00	0.3	0.00	0.00	0.00	
	Unclassified						
	Total Class Lab	0		0	0	0	0
	RESEARCH LABS						
	Research Disciplines A	0.00	45.0	0.00	0.00	0	0
	Research Disciplines B	0.00	30.0	0.00	0.00	0	0
	Research Disciplines C	0.00	20.0	0.00	0.00	0	0
	Research Disciplines D	0.00	10.0	0.00	0.00	0	0
	Research Disciplines E	61	1.0	60.50	0.00	0%	0.0
	Unclassified						
	Total Research				**0**	**#DIV/0!**	**0**
	OFFICE - ACADEMIC						
	Total FTE Faculty	1.00	12.0	12.00	0.00	0%	0.0
	Research Appointments	0.00	12.0	0.00	0.00	0	0
	Total FTE Grads	31.00	3.0	93.00	67.18	72%	0.8
	Total FTE Grads - future growth	60.00	3.0	180.00	50.66	28%	0.2
	Total FTE Non-Acd Staff	4.00	12.0	48.00	50.66	106%	2.2
	Office Service	153.00	0.25	38.25	54.13	142%	3.7
	Office Service - future growth	240.00	0.25	60.00	54.13	90%	1.5
	Total Academic Office			**431**	**277**	**64%**	**-154**
	OFFICE - ADMINISTRATIVE						
	Total FTE Non-Acd Staff	0.00	12.0	0.00		0.00	
	Office Service	0.00	0.5	0.00		0.00	
	Total Admin. Office			0.00		0.00	0.0

Total Office - Academic & Administrative			431.25	0.64	-154.5
LIBRARY FACILITIES & CAMPUS STUDY SPACE					
Study (Total FTE Students)	0.00	0.6	0.00	0.00	0
Traditional Static Shelving Space		0.005	0.00		
Mobile Compact Shelving		0.004	0.00		
Super High Density		0.0035	0.00		
Total Stack	0.00		0.00	0.00	0
Library Support	0.00	0.25	0.00	0.00	0
Total Library Facilities & Campus Study Space			0.00	0.00	00
SUB-TOTAL: TEACHING/RESEARCH/ACAD SUPPORT			**431**	**0**	**0**
OTHER SPACE					
RECREATION / ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	0.00	0.9	0.00		
Total P.E./Athletics			0.00	0.00	
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	0.00	0.015	0.00	0.00	
STUDENT AND CENTRAL SERVICES					
Total FTE Students	0.00	1.5	0.00	0.00	
SUB-TOTAL: OTHER SPACE			**0.00**	**0.00**	
TOTAL FORMULA AREAS			**431.25**	**277**	**64%**	**0**

APPENDIX 2: 100% Design Development Plans



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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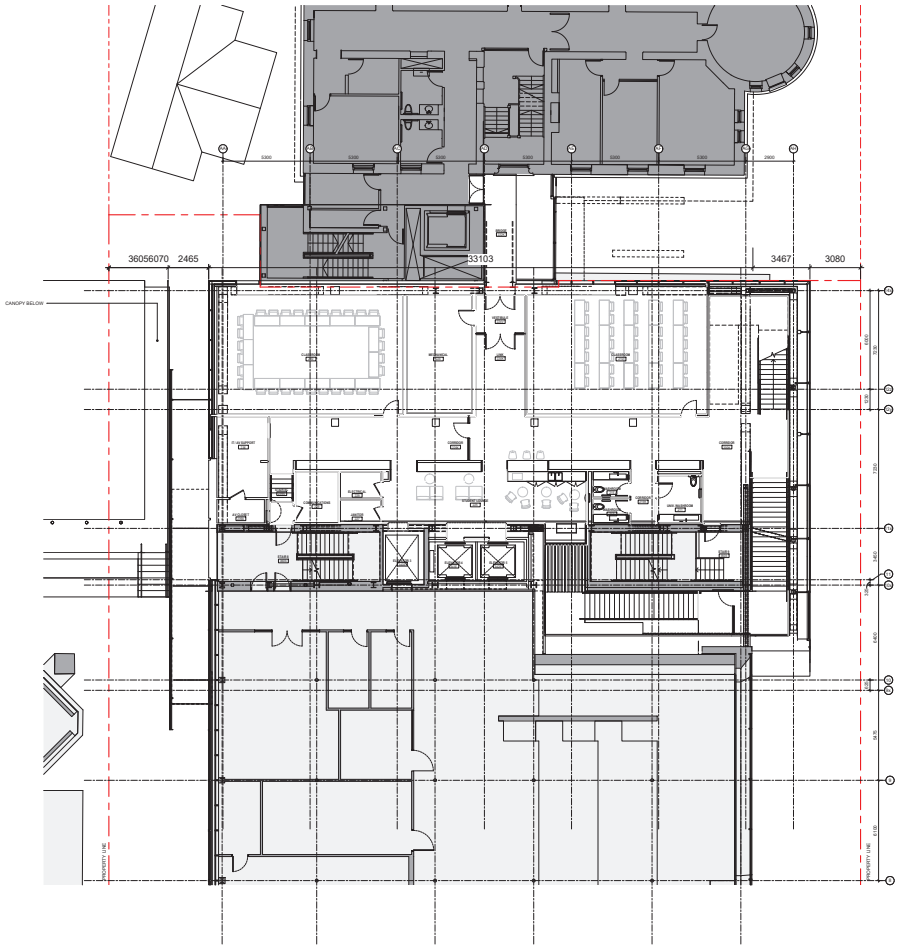
FLOOR PLAN - LEVEL 1

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.01



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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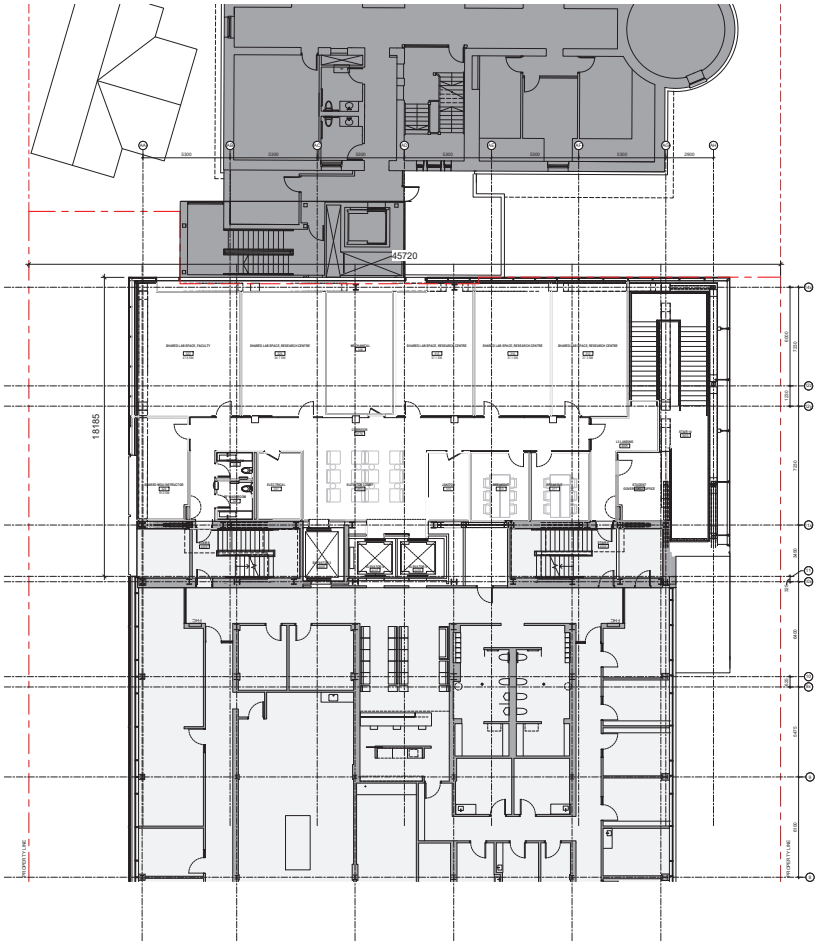
FLOOR PLAN - LEVEL 2 - MUNK

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.02



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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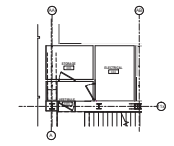
FLOOR PLAN - LEVEL 3 - MUNK

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.03



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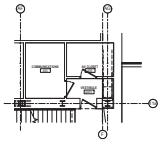
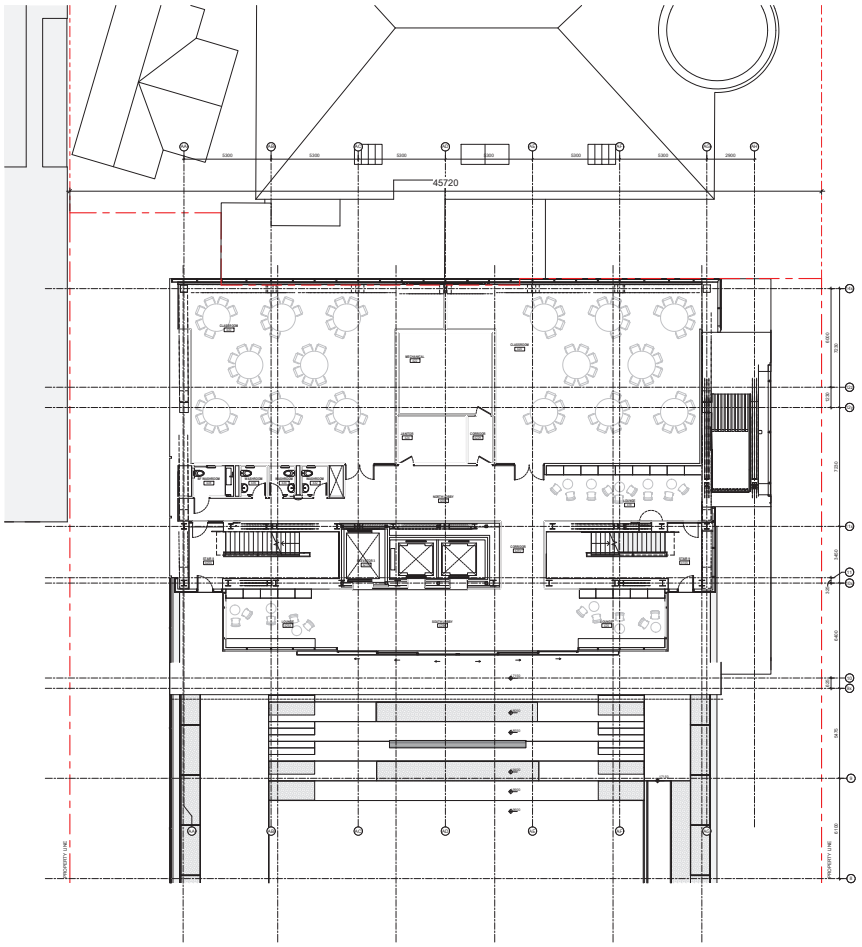
1 : 100 1 / 1 1



3 1$Level 4.5 - STAIR MEZZ EAST
1 : 100 1 / 1 1



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3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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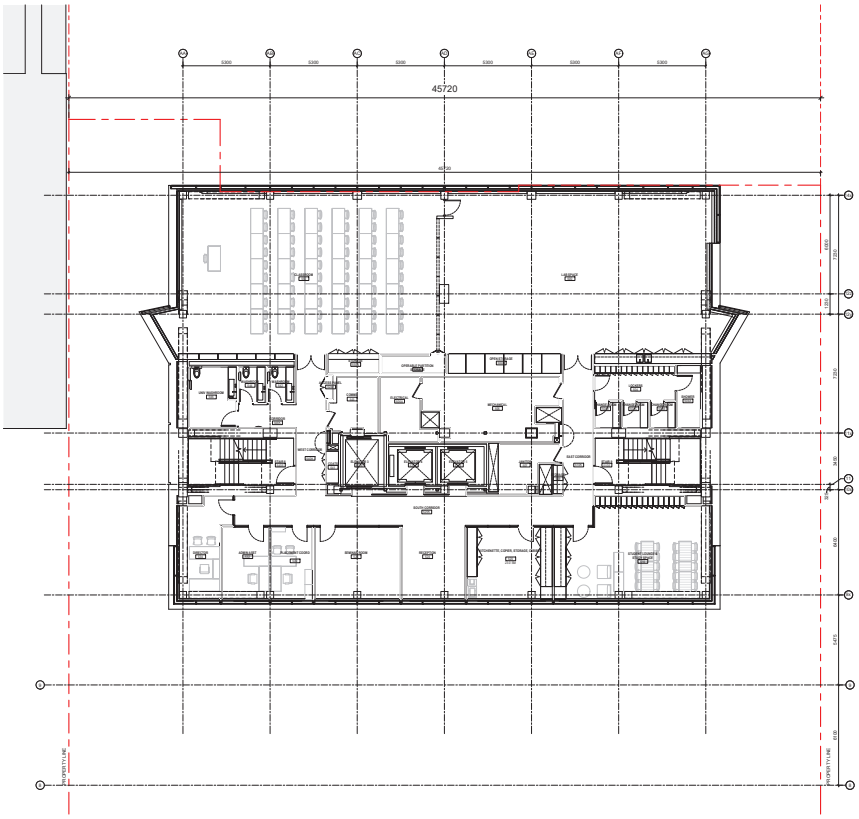
FLOOR PLAN - LEVEL 4 - ACE + TERRACE

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.04



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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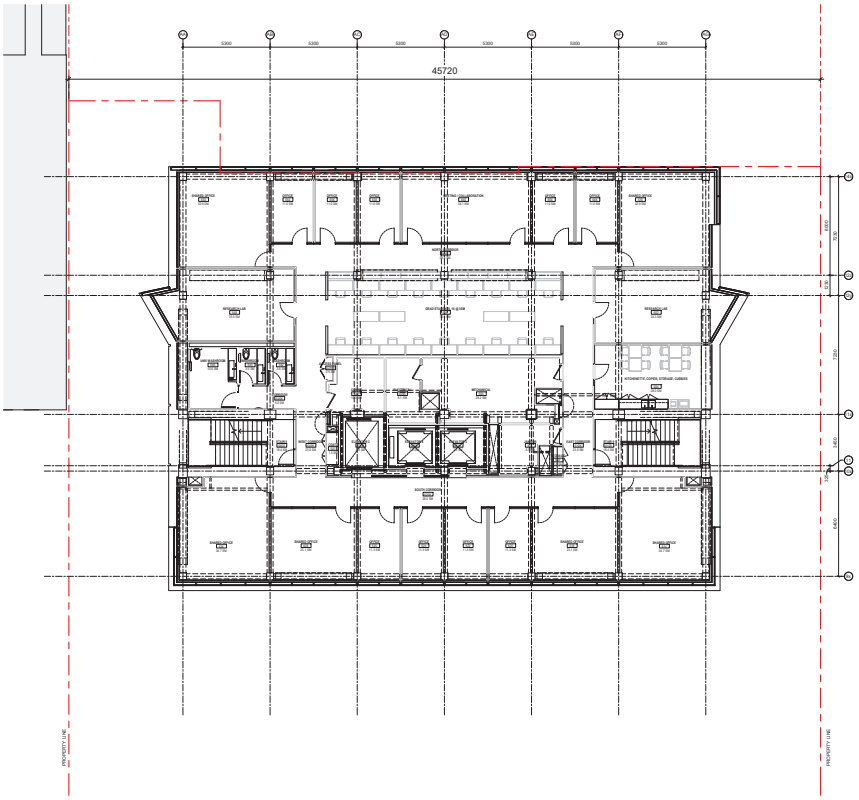
FLOOR PLAN - LEVEL 5 - FKPE

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.05



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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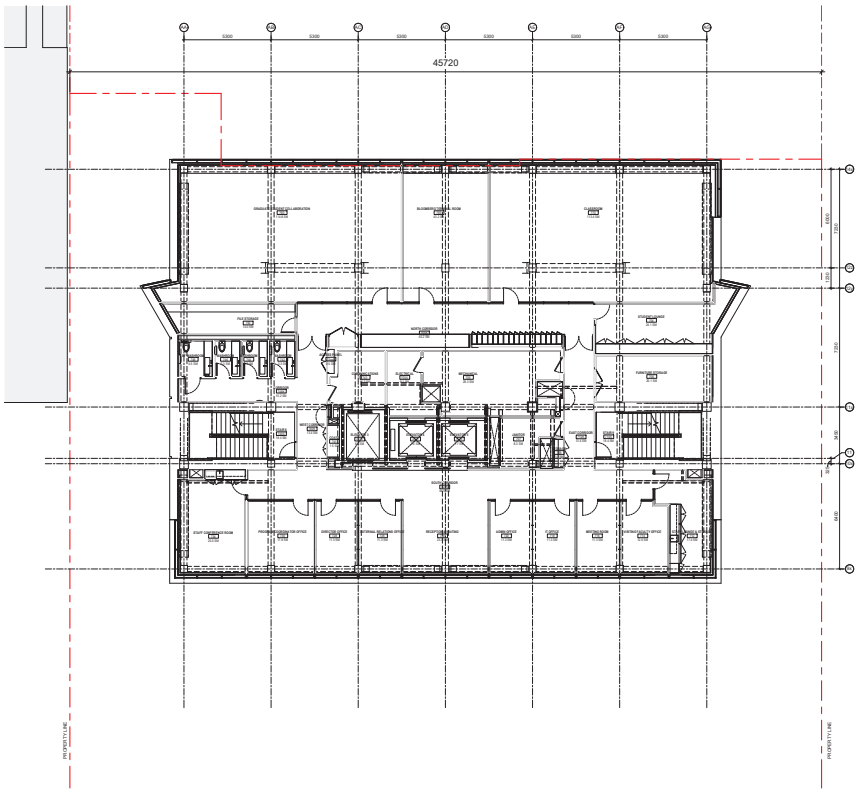
FLOOR PLAN - LEVEL 6 - FKPE

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.06



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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Academic Wood Tower

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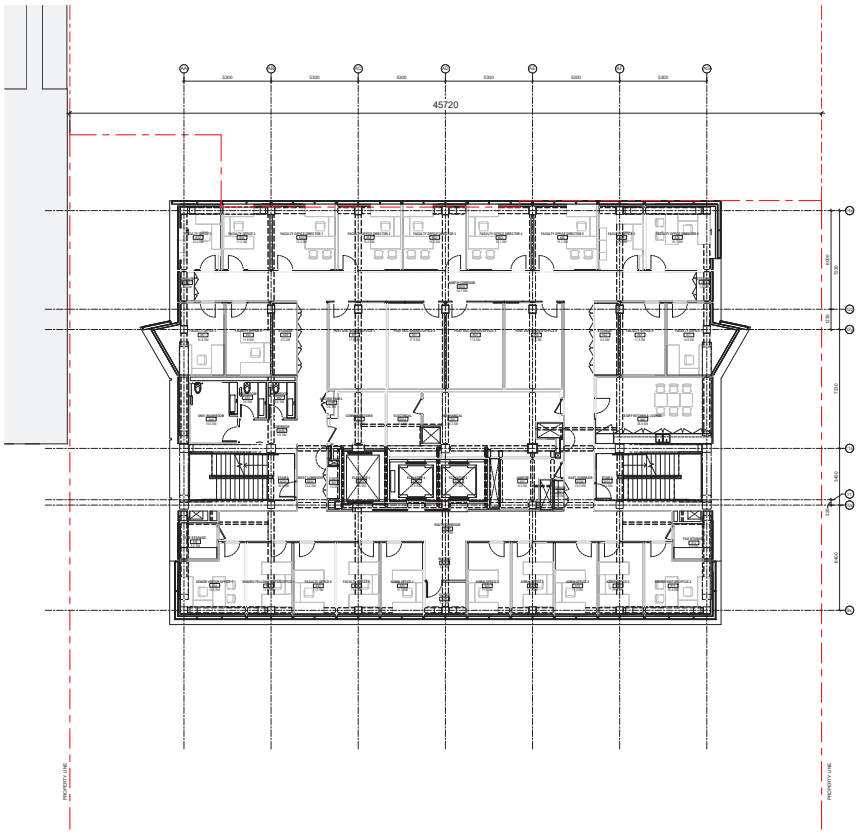
FLOOR PLAN - LEVEL 7 - MMF

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.07



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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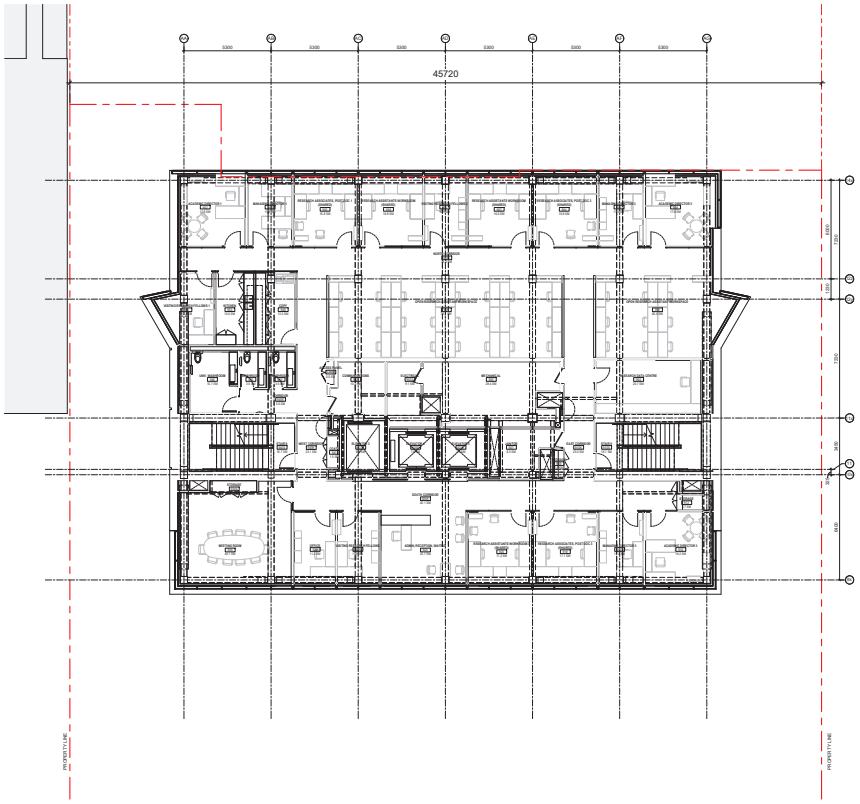
FLOOR PLAN - LEVEL 8 - MUNK

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.08



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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Academic Wood Tower

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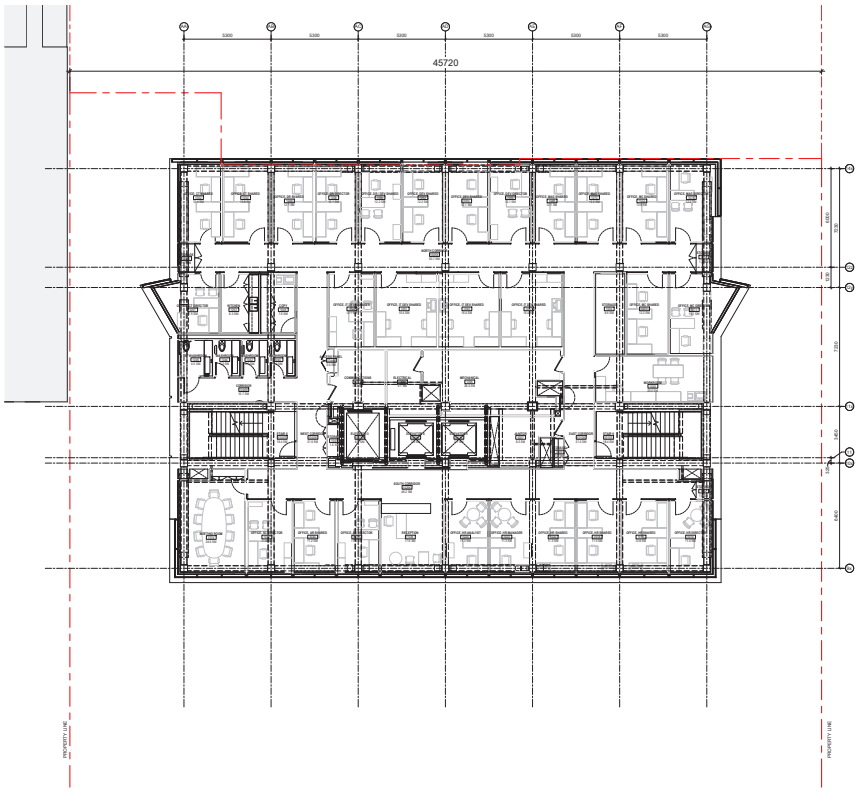
FLOOR PLAN - LEVEL 9 - ROTMAN

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.09



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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Academic Wood Tower

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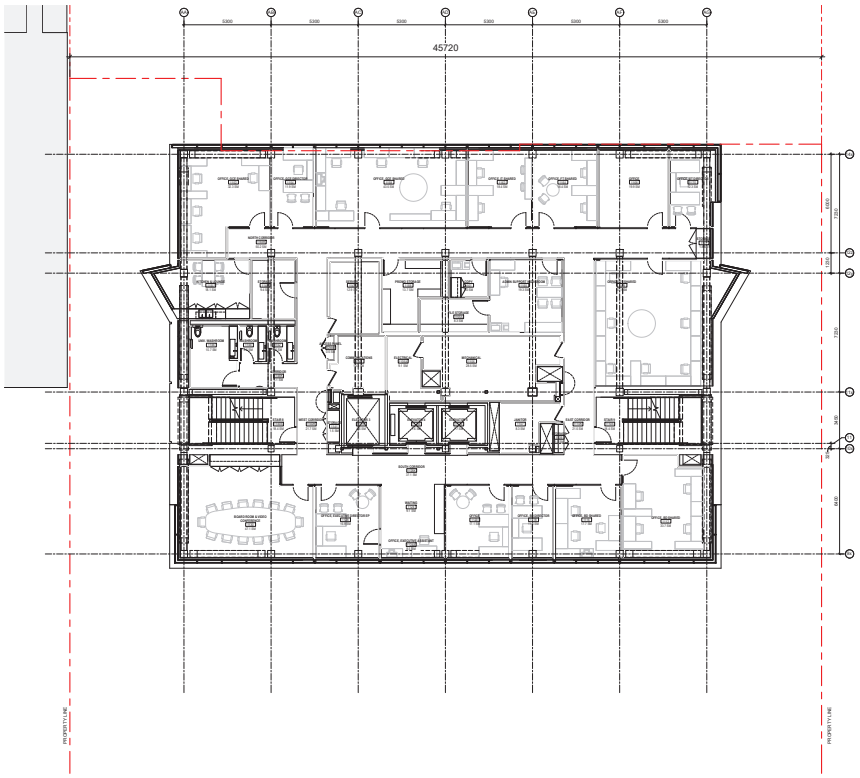
FLOOR PLAN - LEVEL 10 - ROTMAN

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.10



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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Academic Wood Tower

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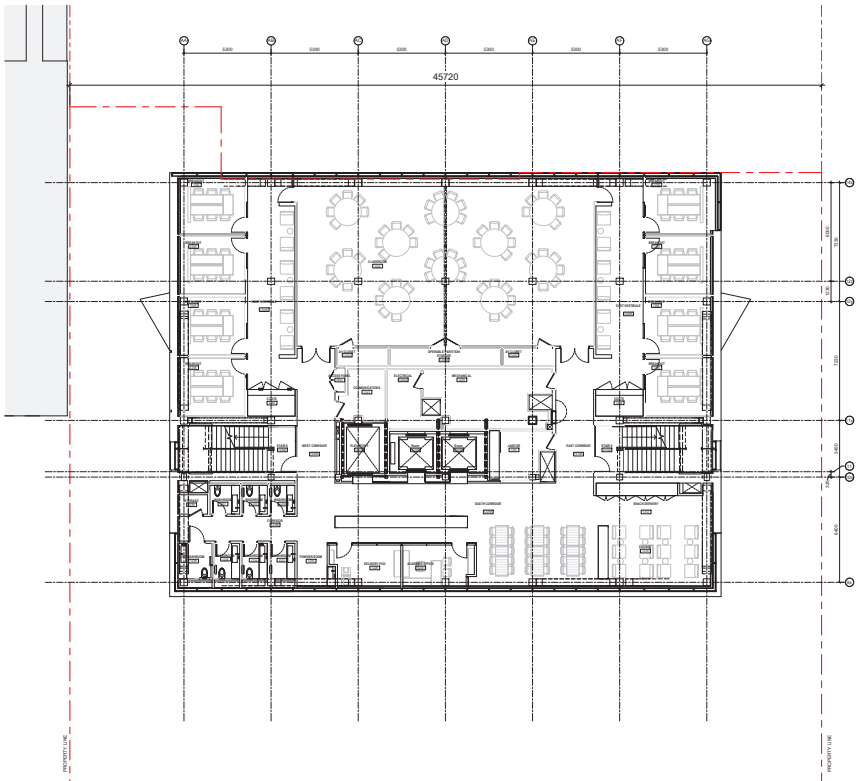
FLOOR PLAN - LEVEL 11 - ROTMAN

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.11



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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Academic Wood Tower

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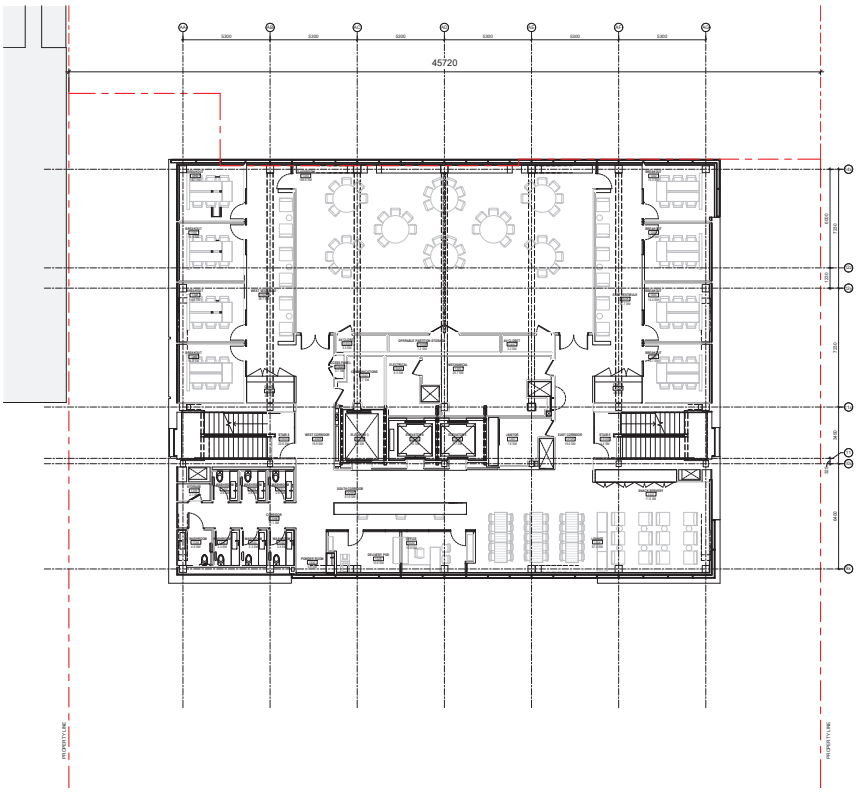
FLOOR PLAN - LEVEL 12 - ROTMAN

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.12



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

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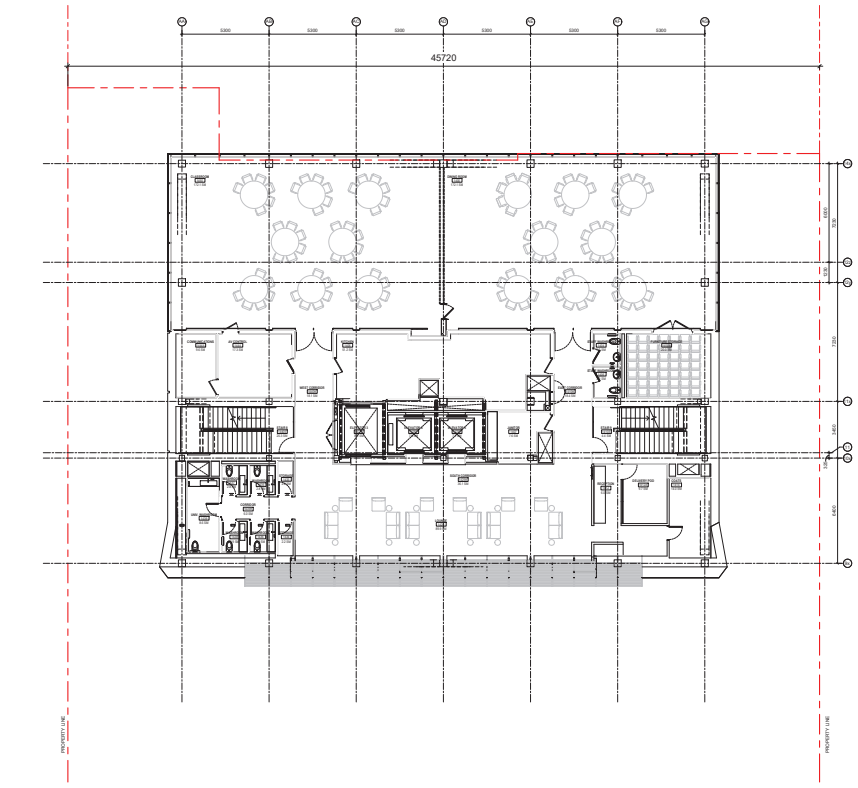
Academic Wood Tower

100 Devonshire Place, University of Toronto

FLOOR PLAN - LEVEL 13 - ROTMAN

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.13



No.	Date	Issued for
3	2020.05.15	Issued for Site Plan Control (SPA)
2	2019.04.11	Issued for Resubmission of Zoning By-law Amendment
1	2018.08.30	Issued for Zoning By-law Amendment

DRAFT
NOT FOR CONSTRUCTION

North Arrow | Seal

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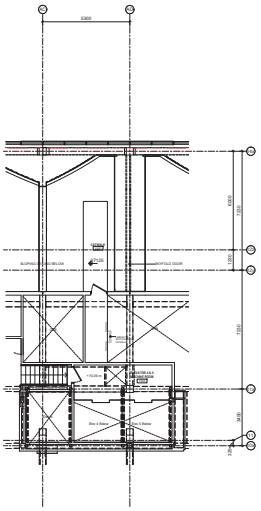
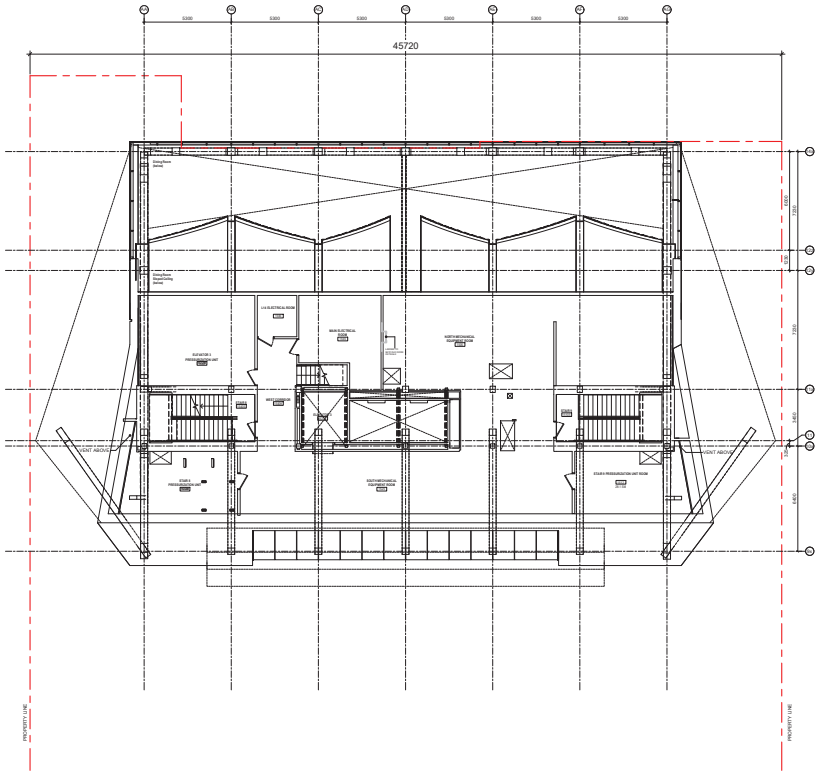
FLOOR PLAN - LEVEL 14 - ROTMAN

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.14



2 ZBA Level 15 MEZZANINE - ELEV 4 AND 5 MACHINE ROOM
1 : 100 4 / A7.12



1 ZBA Level 15A - MECHANICAL
1 : 100 1 / 1.1

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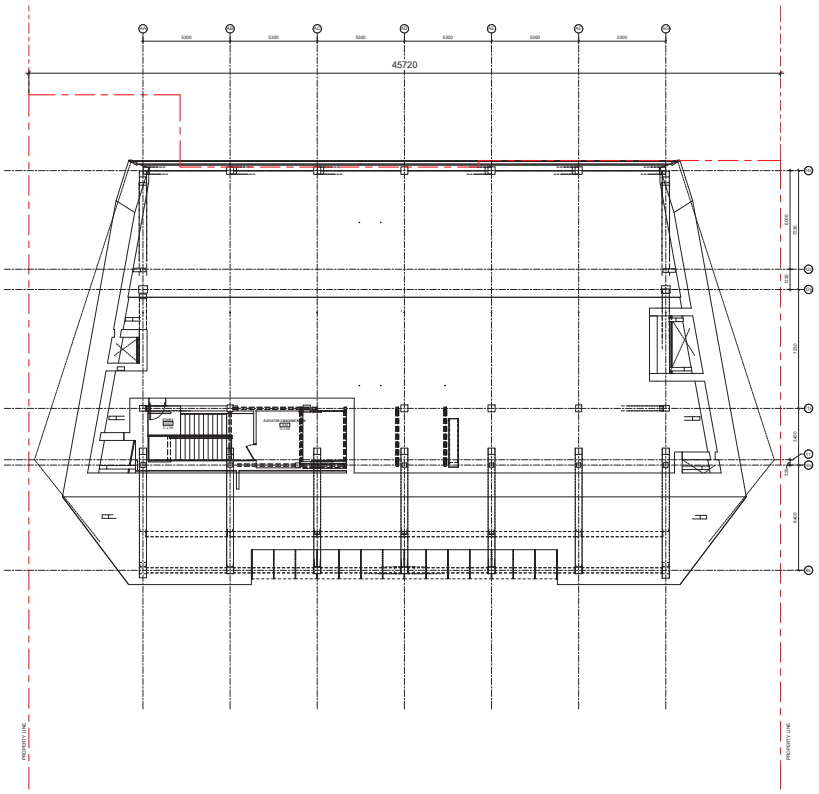
FLOOR PLAN - MECHANICAL

Project Number: 1802
Date: 2019.04.12
Scale: 1 : 100

SPA.1.15



AWT ROOF AREAS TABLE

TOWER TOTAL ROOF AREA	676 m²
TOWER REQUIRED GREEN ROOF AREA (40%)	270 m²
TOWER GREEN ROOF PROVIDED	270 m²

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FLOOR PLAN - PARAPET

Project Number: 1802
Date: 2019.04.12
Scale: As indicated

SPA.1.16


MUNK SCHOOL OF GLOBAL AFFAIRS