UTM North B: Space Requirements As Measured By COU Space Standards and Adjusted to reflect UTM policy/actual requirements, 2016/17

Dept	Room Type	Input Measure 2016/17	Space Factor	Generated Space 2016/17	Proposed Space	% P/G	COU Cat	Notes
ENG	Total FTE Faculty	17.50	13.0	227.50	282.00	94.3	4.1	1 Teach (exist), 16.31 Res. (14.31 exist + 2 growth)
ENG	Faculty Supplement	5.50	13.0	71.50			4.1	allowance for 3 CLTAs + 2.4 sessional instructors
HIS	Total FTE Faculty	28.85	13.0	375.05	510.00	98.2	4.1	3 Teaching (existing), 25.85 Research (21.85 + 4)
HIS	Faculty Supplement	11.10	13.0	144.30			4.1	allowance for 3 CLTAs + 8.1 sessional instructors
LAN	Total FTE Faculty	18.50	13.0	240.50	354.00	92.3	4.1	4.3 Teaching (1 + 3.3), 14 Research (11 + 3)
LAN	Faculty Supplement	11.00	13.0	143.00			4.1	allowance for 2.9 CLTAs + 7.9 sessional
PHI	Total FTE Faculty	15.00	13.0	195.00	234.00	97.3	4.1	all research (14 + 1)
PHI	Faculty Supplement	3.50	13.0	45.50			4.1	allowance for 1.7 CLTAs + 1.7 sessional instructors
POL	Total FTE Faculty	18.50	13.0	240.50	282.00	96.4	4.1	1 Teaching (exist), 17.5 Research (15.5 + 2)
POL	Faculty Supplement	4.00	13.0	52.00			4.1	allowance for .57 CLTAs + 3.1 sessional (exist)
SOC	Total FTE Faculty	27.00	13.0	351.00	366.00	90.7	4.1	2 Teaching (existing), 25 Research (17 + 8)
SOC	Faculty Supplement	4.05	13.0	52.65			4.1	allowance for 2.9 sessional (exist)
	TOTAL FACULTY OFFICES			**2,138.50**	**2,028.00**	**94.8**	**4.1**	
Emeriti will be acommodated outside of the North B project in the Davis Building Senior Scholars Centre, which reduces the faculty office requirement by Department.								
ENG	Total FTE Non-Acd Staff	2.33	13.0	30.29	36.00	118.9	4.4	1.83 (exist) + .5 (growth)
HIS	Total FTE Non-Acd Staff	4.00	13.0	52.00	48.00	92.3	4.4	4 (exist)
LAN	Total FTE Non-Acd Staff	3.00	13.0	39.00	63.00	96.9	4.4	2.3 (exist) + .7 (growth)
LAN	Total FTE Staff CTEP	2.00	13.0	26.00			4.4	1.5 (exist) + .5 (growth)
PHI	Total FTE Non-Acd Staff	2.00	13.0	26.00	24.00	92.3	4.4	1.9 (exist) + .1 (growth)
POL	Total FTE Non-Acd Staff	2.70	13.0	35.10	36.00	102.6	4.4	2.3 (exist) + .4 (growth)
SOC	Total FTE Non-Acd Staff	4.00	13.0	52.00	48.00	92.3	4.4	2.9 (exist) + 1.1 (growth)
	TOTAL STAFF OFFICES			**260.39**	**255.00**	**97.9**	**4.4**	
ENG	Office Support	385.25	0.25	96.31	111.50	115.8	4.5	39 nasm dedicated plus 72.5 nasm shared
HIS	Office Support	653.79	0.25	163.45	121.50	74.3	4.5	49 nasm dedicated plus 72.5 nasm shared
LAN	Office Support	509.00	0.25	127.25	111.50	87.6	4.5	39 nasm dedicated plus 72.5 nasm shared
PHI	Office Support	320.63	0.25	80.16	111.50	139.1	4.5	39 nasm dedicated plus 72.5 nasm shared
POL	Office Support	379.35	0.25	94.84	112.50	118.6	4.5	40 nasm dedicated plus 72.5 nasm shared
SOC	Office Support	608.40	0.25	152.10	121.50	79.9	4.5	49 nasm dedicated plus 72.5 nasm shared
	TOTAL OFFICE SUPPORT			**714.11**	**690.00**	**96.6**	**4.5**	

UTM North B: Space Requirements As Measured By COU Space Standards and Adjusted to reflect UTM policy/actual requirements, 2016/17

Dept	Room Type	Input Measure 2016/17	Space Factor	Generated Space 2016/17	Proposed Space	% P/G	COU Cat	Notes
ENG	Research Appointments	2.00	13.0	26.00	12.00	46.2	4.2	2 PdFs (growth)
HIS	Research Appointments	3.00	13.0	39.00	24.00	61.5	4.2	2.5 (exist) + .5 (growth)
LAN	Research Appointments	2.00	13.0	26.00	12.00	46.2	4.2	2 PdFs (growth)
PHI	Research Appointments	2.00	13.0	26.00	12.00	46.2	4.2	.5 (exist) + 1.5 (growth)
POL	Research Appointments	1.00	13.0	13.00	12.00	92.3	4.2	.9 (exist) + .1 (growth)
SOC	Research Appointments	1.00	13.0	13.00	12.00	92.3	4.2	.3 (exist) + .7 (growth)
ENG	Total FTE Grads	4.00	4.0	16.00	45.00	149.7	4.3	4 PhD (growth)
ENG	Total TA's	11.25	1.25	14.06			4.3	
HIS	Total FTE Grads	5.00	4.0	20.00	47.00	108.2	4.3	
HIS	Total TA's	18.75	1.25	23.44			4.3	37.5 TA's (exist), divided by 2 to estimate grad/TA overlap
LAN	Total FTE Grads	3.00	4.0	12.00	23.00	66.7	4.3	3 PhD (growth) deficit addr. by surplus in research
LAN	Total TA's	18.00	1.25	22.50			4.3	18 TA's (15 LS + 3 CTEP)
PHI	Total FTE Grads	0.00	4.0	0.00	29.00	103.1	4.3	
PHI	Total TA's	22.50	1.25	28.13			4.3	22.5 TA's (existing)
POL	Total FTE Grads	0.00	4.0	0.00	39.00	100.6	4.3	
POL	Total TA's	31.00	1.25	38.75			4.3	31 TA's (existing)
SOC	Total FTE Grads	24.00	4.0	96.00	87.00	58.8	4.3	4 MASc (exist), 20 PhD (12+8) deficit addressed by surplus in research
SOC	Total TA's	35.00	1.25	43.75			4.3	70 TA's (existing), divided by 2 to estimate grad/TA overlap
ENG	Research Disciplines E	19.31	1.0	19.31	20.00	72.4	3	16.31 Fac + .5(2 PdF) + .5 (4 PhD)=19.31
ENG	Research ROP	6.25	1.3	8.31		0.0	3	3 ROP = 1 FTE Grad based on a 12 hour week =1.3 nasm per ROP
HIS	Research Disciplines E	29.85	1.0	29.85	89.00	298.2	3	25.85 Fac + .5(3 PdF) + .5 (5 PhD)=29.85
HIS	Research ROP	41.25	1.3	54.86		0.0	3	
LAN	Research Disciplines E	16.50	1.0	16.50	51.00	309.1	3	14 Fac + .5(2 PdF) + .5 (3PhD)=16.5
LAN	Research ROP	0.00	1.3	0.00			3	
PHI	Research Disciplines E	16.00	1.0	16.00	21.00	131.3	3	15 Fac + .5(2 PdF) + .5 (0 grad)=16
PHI	Research ROP	0.00	1.3	0.00			3	
POL	Research Disciplines E	18.00	1.0	18.00	18.00	100.0	3	17.5 Fac + .5(1 PdF) + .5 (0 grad)=18
POL	Research ROP	0.00	1.3	0.00			3	
SOC	Research Disciplines E	37.50	1.0	37.50	94.00	250.7	3	25 Fac + .5 (1 PdF) + .5 (24 grad)=37.5
SOC	Research ROP	6.25	1.3	8.31		0.0	3	
	TOTAL RESEARCH + GRAD SPACE			**666.27**	**647.00**	**97.1**	**3,4.2,4.3**	combination of shared and dedicated space

All input measures are FTE and areas shown are in nasm.
Adjustments are in blue.

2011 UTM Campus Master Plan: Planning Principles:

Campus Planning Principles

UTM's Planning Principles have been created to help guide proposed campus development, and should be read in conjunction with review of proposed building envelopes.

They were derived from key concepts first presented in the 2000 Master Plan, and evolved in response to feedback from the UTM community. During an intense period of community engagement from January to April 2010, a series of meetings, a web link to the Master Plan from the UTM homepage and email contact allowed students, staff and faculty to provide feedback on the Planning Principles. Key themes emerged from this consultation, including:

- a desire for centralized outdoor common space;
- improved pedestrian connections on campus and to outlying areas;
- preservation of green space;
- increased campus amenity; and
- a well-articulated sense of UTM's academic mission and campus identity through built form.

The pages that follow outline Campus Planning Principles under seven headings >

1. CAMPUS ENVIRONMENT
2. LAND USE
3. MASSING
4. BALANCED INTENSIFICATION
5. SUSTAINABILITY
6. ACCESSIBILITY
7. HERITAGE PRESERVATION

North Field (future Campus Green)

The existing North Field has the potential to serve as a unifying element on the UTM campus if enhanced as a multi-use, flexible open space accessible to the broader University community. It is the largest single open space at UTM, comparable in scale to St. George's Front Campus.

Engaging the Ecological Context

UTM's existing Nature Trails provide an entry point into the rich ecological zones along the Credit River valley. The trail network can be enhanced to provide greater accessibility and connection to the University's unique natural context.

Land Allocation

The supply of parking on campus remains a challenge and a particularly inefficient use of land if constructed as surface level-only. Solutions lie in a combination of enhanced transit options and reduced-footprint parking amenities.

CAMPUS ENVIRONMENT

The University community's environment must:

- support intellectual aspirations of its community;
- build on a fundamental framework of social and environmental amenity;
- be vibrant and encourage activity;
- relate buildings to landscapes and create a logical sequence of movement;
- provide shelter and active travel between buildings;
- be safe, secure, and accessible;
- respect and engage with the unique ecological context; and
- maintain and enhance a central unified open space, as a unifying element on campus.

This Principle defines the vision and aspiration of spaces between buildings. The principles under Campus Environment recognize the University's unique sense of place as far more than the sum of its parts.

Related section under Opportunities & Challenges: Open Space

LAND USE

Uses and functions assigned to the campus' physical environment must:

- promote the University's academic goals and serve its overall mission;
- consider non-academic uses that are compatible with, contribute to and engage the University community;
- enhance the connection between residential and academic life;
- respect and engage with the ecological context;
- seek opportunities to animate the campus, particularly by locating active use at the ground floor level and providing transparency between indoor and outdoor spaces; and
- ensure a visionary campus plan where parking, transit, servicing and traffic planning coordinate with existing and future buildings.

Unlike the 2000 Plan, this Master Plan does not identify specific building programs or land use zoning for each development site. The Land Use Principle provides overarching intent within an otherwise flexible framework.

Related sections under Opportunities & Challenges: Circulation, Open Space, Environment and Housing

MASSING

The form and scale of future expansion should define and develop appropriate relationships with surrounding buildings and landscapes. New construction must take into account impact on micro-climatic conditions creating an animated streetscape, and minimizing shadow and wind conditions.

Erindale Hall is a positive example of built form on campus, appropriate in scale and proportion. The north face of the residence building gives definition to the Five-minute Walk stretching between the Student Centre and North Building; the south side undulates to allow greater view and connection in response to the surrounding natural environment.

Erindale Hall, north elevation

In addition to successfully negotiating two very different campus conditions to the north and south, Erindale Hall provides a colonnade running parallel to the 5-Minute Walk for use during inclement weather.

BALANCED INTENSIFICATION

Future campus development must enhance, not overwhelm, existing University environs while making efficient use of limited campus land. The Plan seeks to:

- balance the desire for consolidation and the desire to connect to the outdoor environment;
- enliven and shape the spaces between and within buildings;
- strive to achieve the appearance of a complete campus at each phase of the plan; and
- ensure the adjacent community is addressed in scale and presence, while presenting a prominent and inviting image of an academic institution.

Though the Principle of Balanced Intensification applies equally to all three University campuses, the context is quite different. Despite a large land holding, UTM must be sensitive in its development footprint. UTM is unique, given its proximity to the Credit River, its woodlands, and its location within a predominantly residential district. In response, academic expansion sites are contained primarily within the ring road. In addition to sensitivity toward existing context, new buildings must also be thoughtful in creation of new context. As stated in the 2000 Master Plan "each building project is responsible for creating the open space that surrounds it".

Related sections under Opportunities & Challenges: Open Space and Environment; and Sites & Sectors

Recreation, Athletics & Wellness Centre (RAWC)

The RAWC has created a positive street presence along Outer Ring Road and serves to connect through to the Davis Building beyond. Its massing at the street level helps to identify the building as a secondary gateway to the inner campus.

Communication, Culture and Technology Building, CCT

An example of enlivening and shaping the spaces between buildings, the CCT's siting in relation to the Davis Building created an intimately-scaled outdoor courtyard. Glazing along perimeter walls allows visual connection to the exterior from interior ground floor spaces.

Solar Panel Array, Davis Building

The solar panel retrofit on the Davis Building is a prominently displayed example of a sustainable energy technology in use at UTM. Displays inside the building provide real-time energy use data.

Bike Share program

Students, faculty and staff can sign out a bicycle free of charge to use for up to 24 hours. This recent initiative is promotes active lifestyles and provides alternative transportation to improve the local air quality and campus parking congestion.

Green Roof, RAWC Building

The green roof on the RAWC facility is an example of sustainable building technology that mitigates storm water runoff, provides additional habitat for local species, and reduces both building cooling loads and the campus' urban heat island effect.

SUSTAINABILITY

Beyond reduced environmental impact, the University of Toronto Mississauga seeks to:

- take a leadership role in line with the University's overall mission;
- advance opportunities to link sustainability principles with research and teaching;
- promote its environmental achievements on campus and to the out side community;
- meet the University's stringent Design Standards related to environmental measures, and continue to strive beyond minimum requirements;
- incorporate technological advancements in building and landscape design, and seek partnerships where appropriate;
- encourage bicycle commuting and transit-oriented modes of travel; and
- enhance, connect and respond to the Campus' ecological context.

Environmental stewardship continues to be a high priority in discussions with the UTM community given the campus' naturalized context and the institution's emphasis on environmental sciences, sustainability, biodiversity and climate in programs such as geography, chemical and physical sciences, and management.

Recent buildings reflect both UTM's banner for growth – *Grow Smart, Grow Green* – with the Hazel McCallion Academic Learning Centre completed in 2006, the first building on campus to achieve LEED® Silver certification, and current projects (registered with the Canada Green Building Council (CaGBC)) aiming to achieve LEED® Silver or higher.

Related section under Opportunities & Challenges: Sustainability

ACCESSIBILITY

The University's buildings and landscape must accommodate a diverse population in an open and inclusive campus. The campus environment should adhere to the principles of universal design.

UTM is a relatively new campus and as such largely accessible. Nonetheless, certain improvements can be made such as to the ramp at the main entrance to the Davis Building and the front door to campus. The design of the ramp also could be better integrated into the architecture.

Standards are anticipated to become more stringent in the near future once the Accessibility of Ontarians with Disabilities Act (AODA) *Accessible Built Environment Standard* is legislated.

Related section under Opportunities & Challenges: Accessibility

Accessible Entry, Davis Building

All buildings and connections to buildings throughout the campus should strive to be universally accessible. This accessibility should be integrated into the design process of new and renovated facilities.

HERITAGE PRESERVATION

The University of Toronto seeks to protect and maintain its heritage properties and landscapes. Listed and designated properties should not be considered in isolation, but as character-defining elements within the overall campus context. Development should respect and engage with the contextual value of these heritage elements.

There are only two designated heritage properties on campus (Lislehurst, and Alumni House) both outside Outer Circle Road. The Student Centre and the 1968 wing of the South Building (now the Davis Building) are listed buildings within the ring road, where most future development will occur.

Mississauga Road is recognized as a Cultural Landscape, as it is one of the City's oldest and most picturesque thoroughfares. The Master Plan is sensitive to UTM's unique context.

Related section under Opportunities & Challenges: Heritage

Cultural Landscape, Mississauga Road

This picturesque thoroughfare serves as one of UTM's campus edges and has a distinct character that should be handled with sensitivity.

2011 UTM Campus Master Plan: Site 7 North Campus Expansion:

Area Plan:

Area plan with North Campus development site

Proposed new development in this sector includes the following:

Site 7 North Campus expansion

SITE 7: North Campus expansion

View of North Building's west facade with entrance drop-off in foreground

North Building service entry at the south of the site

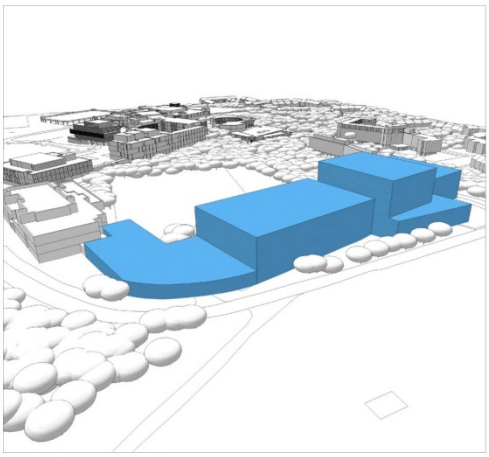
Site 7 Context:

Site 7 is the current location of the North Building and parking Lot 1. The building, constructed more than 40 years ago as a temporary structure, does not meet current and projected space needs for Humanities. Furthermore, the scale, proportions and materiality of the North Building no longer fit the context of a campus, which has matured substantially over the last decade.

The site is located between the western-most portion of Outer Circle Road, one level above the main campus, and the proposed Campus Green. The current low-slung 2-storey structure lacks a sense of arrival or destination from both the Five-minute Walk approach, and the main road. The proposed north expansion presents an opportunity to anchor this end of campus. Full development of the site will complete the pedestrian connection between the Five-minute Walk and the new Instructional Centre.

The proposed envelope is configured to accommodate the likelihood of phased demolition of the North Building, and construction of a series of projects over time. Development of Site 7 will eventually involve the demolition of parking Lot 1 and thereby require that the 115 existing parking spaces be relocated elsewhere on campus or incorporated into development.

Proposed Envelope Capacity:



View southeast toward Site 7

Proposed Courtyard/Forecourt
Service/Pedestrian Walkway
Existing Building
Proposed Envelope

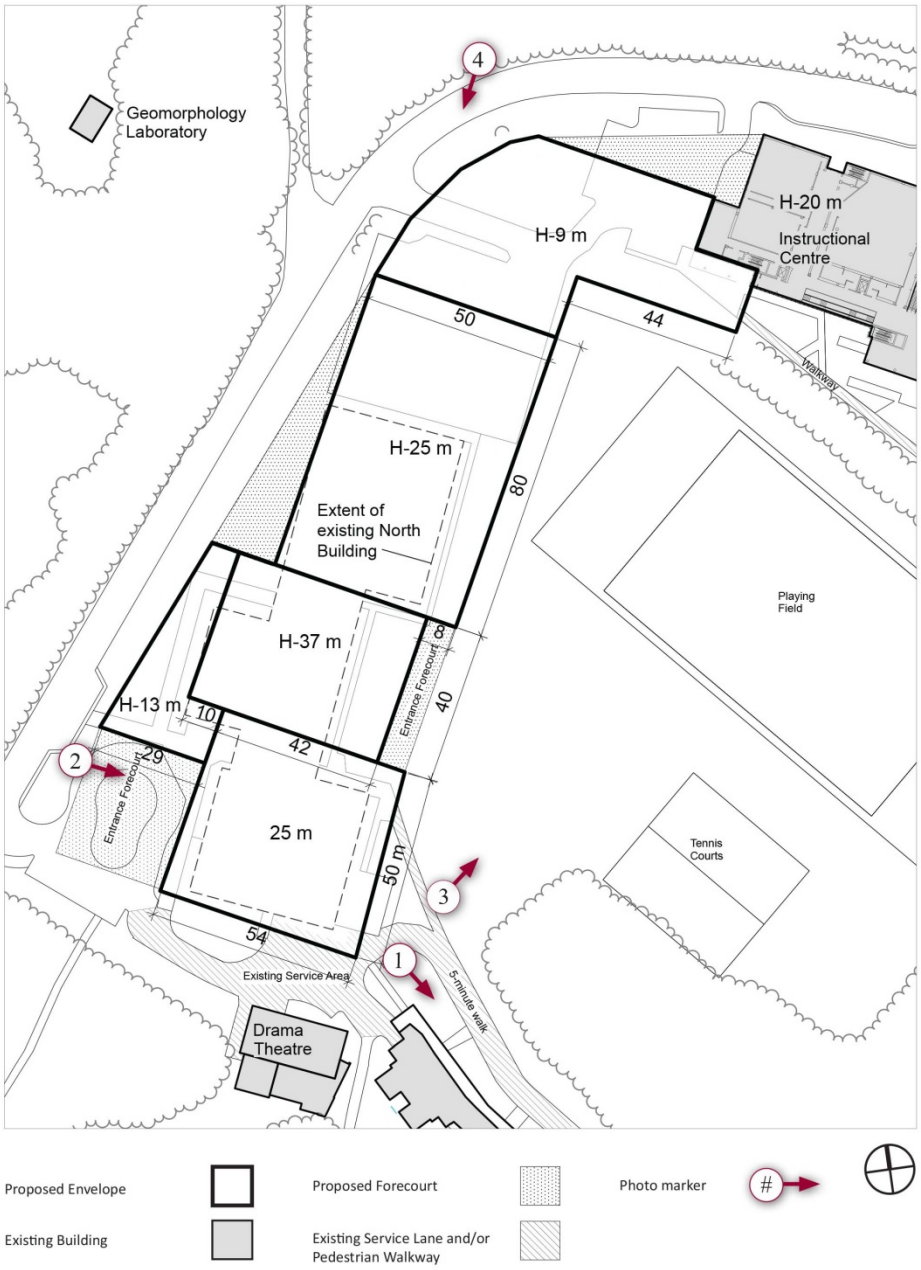
Proposed Envelope:

Proposed Envelope:	68,034 gsm
Discounted Envelope:	57,829 gsm
Maximum Height:	37 m

Use Assumptions:

Heights are taken from the elevation at Campus Green, approximately one storey below Outer Circle Road.
The proposed envelope accounts for phased demolition of the North Building, and phased construction.

SITE 7: North Campus expansion



Site Photos:

View from North Building service lane to the Five-minute Walk and Erindale Hall

Drop-off loop in front of North Building

View of athletic field (future Campus Green) and Instructional Centre under construction

View from Outer Circle Road toward parking Lot 1 and the North Building

SITE 7: North Campus expansion

Development Context:

Secondary Effects:
- The proposal calls for demolition of the North Building.

Parking:
- There are 115 parking spaces on this site, most of which will be impacted by development.
- Opportunities to incorporate parking into future Site 7 development should be considered.

Servicing:
- The site can be served directly from Outer Circle Road at any point. Given the vastness of the site footprint and potential area, more than one service entry may be desirable.
- Connecting to, and expanding, the Instructional Centre Shipping & Receiving area should be considered.

Pedestrian Routes:
- A building or series of buildings on this site should locate main entrances based on future pedestrian paths of travel across the Campus Green, in addition to the existing Five-minute Walk.
- The new buildings should link to the Instructional Centre's main pedestrian thoroughfare. Similar to the CCT Link, interior connections should be transparent where possible to provide views to the outside, and animate the building at grade.

Height and Massing:
- The proposed envelope anticipates large volume spaces such as theatres, classrooms, assembly space.
- A 9-storey tower visually anchors the proposed volume; it allows potential efficiencies for stacked construction of repetitive modules such as offices and labs.
- Stepping down to a maximum of 6 storeys respects the height and scale of adjacent Erindale Hall.

Open Space:
- New construction will view, and frame the edge of, the future Campus Green.

Accessibility:
- New construction and major renovations must comply with the *Ontario Building Code*, and anticipate future legislation of more stringent requirements as identified under the AODA *Built Environment Standard*.

Site Data:

Existing Site Occupancy (above and below grade)

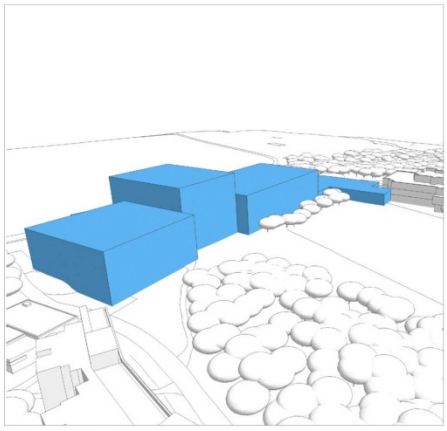
Building	Department	NASM	Gross	
North Building	AccessAbility Resource Centre	47		
	Anthropology	901		
	Business Services	12		
	Campus Infrastructure & Facilities	279		
	Computing Services	38		
	English & Drama	693		
	Food Services	490		
	French, German, Italian	442		
	Historical Studies	571		
	Human Resources	119		
	Microelectronics	27		
	Philosophy	263		
	Registrar	1995		
	Student Organizations	29		
	Unallocated Space	58		
	Utilities & Grounds	19		
	VP Academic	358		
	VP Research	14		
	TOTAL Site Area	**6,356**	**9,467**	to be demolished

Proposed Area (gsm)

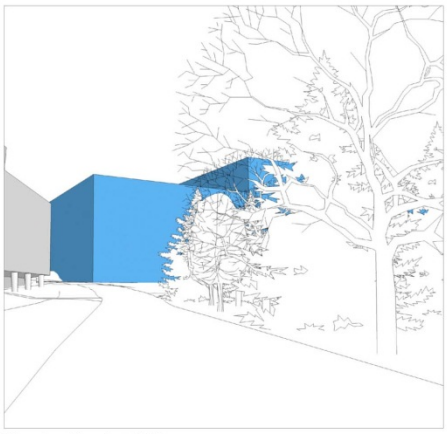
Discounted Envelope:	(above grade):	57,829
	(below grade):	12,651 (assumes 1 storey)
less Area to be Demolished:		9,467
Net Site Increase:		61,013 gsm

SITE 7: North Campus expansion

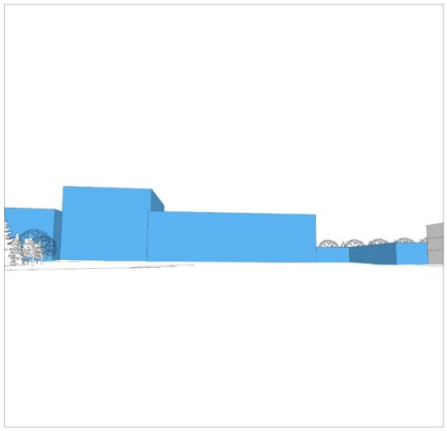
Additional 3D Views (Potential Envelope):



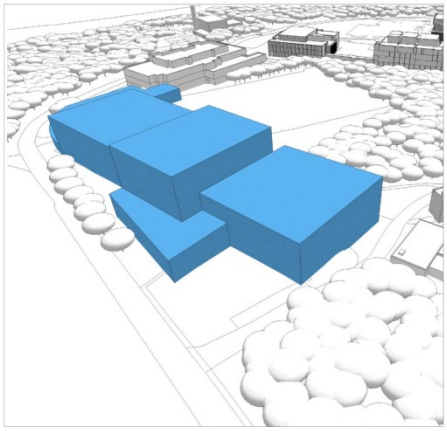
View toward northwest



View along Five-minute Walk



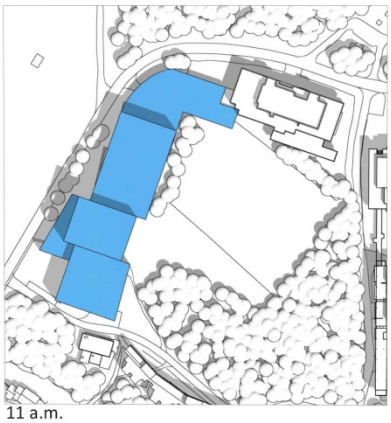
View from Campus Green

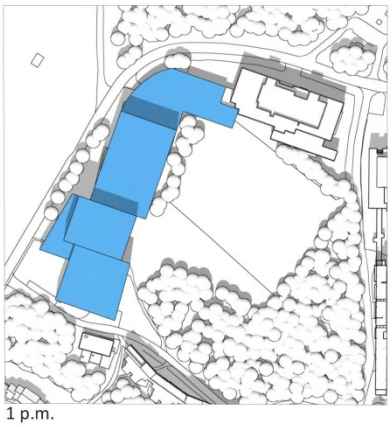


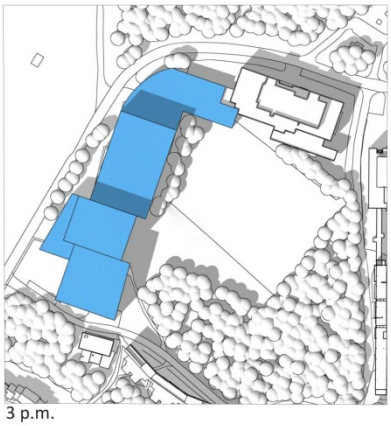
View toward northeast

Shadow Study (September 21):

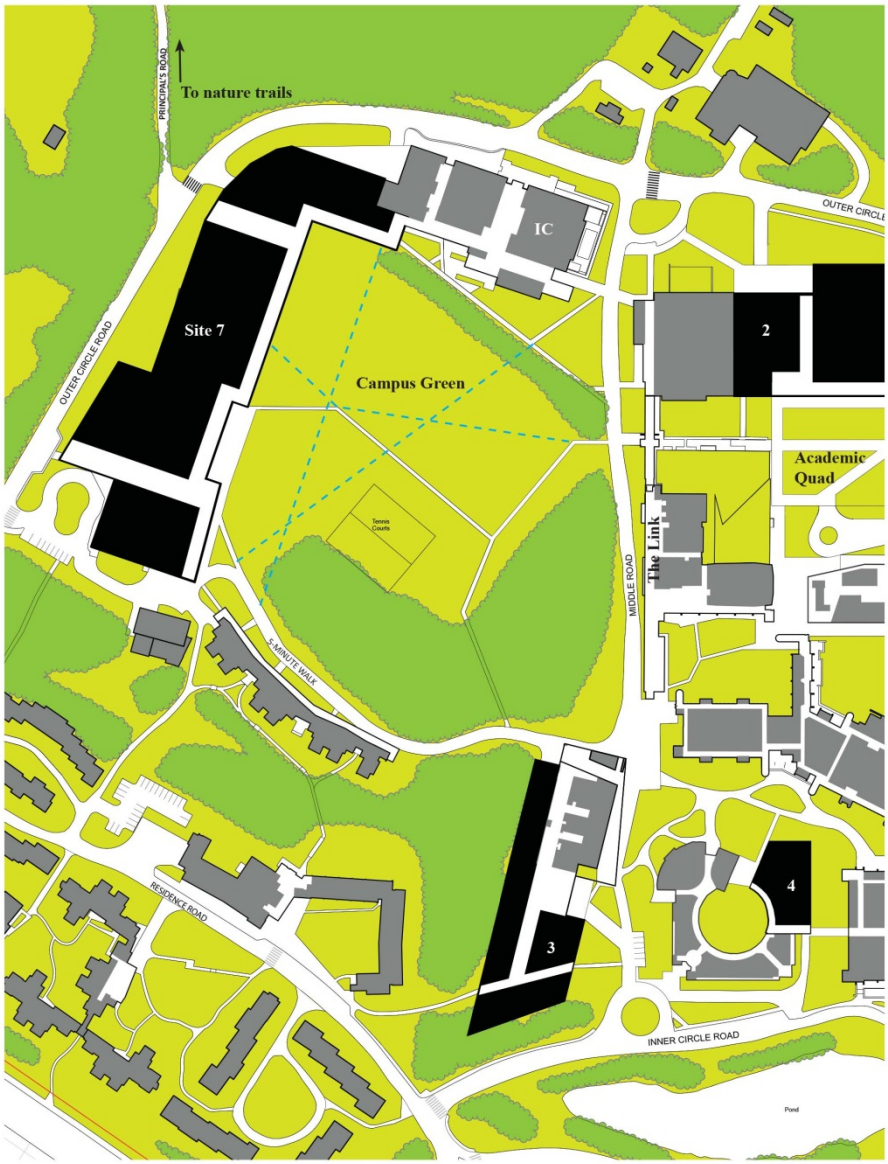

9 a.m.


11 a.m.


1 p.m.


3 p.m.

North Campus Sector Summary



North Campus Sector 'Nolli' plan

Nolli plans show all means of pedestrian passage: streets, laneways, pedestrian pathways and interior 'streets' indicate the fine-grain at which the pedestrian experiences the UTM campus ('Nolli' plan is an architectural parlance, after Giambattista Nolli's map depicting circulation through Rome in the 1700's).

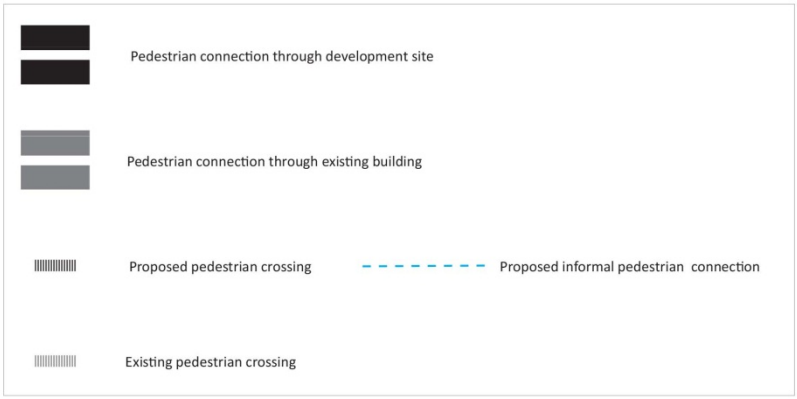
Pedestrian Circulation Plan (Nolli) with Development Sites

Development sites allow for expansion of University facilities within the campus boundaries, while also providing the opportunity to extend and enhance the pedestrian scale environment with the addition of new open spaces and pedestrian level pathways. Shown in black, development sites allow for linkages indoors and out, as illustrated by this plan.

The Instructional Centre (IC) plays a significant role at the campus planning level as it will define one edge of a large campus green, approximately equal in size to the Front Campus on the St. George Campus. A 'Campus Green' proposed in the current location of the north athletic field could instead become a multi-use outdoor space. The plan opposite identifies potential informal pathways across the green, as well as recently constructed paved paths. Both in terms of size and location, this open space offers potential for a multi-use gathering space, especially with the redevelopment of the North Building (Site 7). Uses could include informal gathering, student study and recreation, and could be activated by functions such as community events, alumni gatherings, convocation (now held at St. George), movies, reception, fairs, orientation, conferences etc.

Connections through proposed Site 7 emphasize:

- the continuation of the interior corridor through the newly constructed Instructional Centre;
- an interior connection facing the Campus Green, similar to the CCT Link;
- a prominent connection between a drop-off/pick-up point and UTM Shuttle stop along Outer Circle Road and the inner campus; and
- a second prominent connection to Principal's Road, which leads to the Paleomagnetism Lab, Forensics research area, Weather Station, Artist's Cottage, the Principal's Residence, and ultimately to the trails beyond. Improving safety by providing a pedestrian crossing in this location is critical, particularly in conjunction with new development.



Mechanical & Electrical Design Criteria:

1.0 INTRODUCTION

This briefing note is intended to offer an overview of the overarching Design Criteria that will guide the design for the mechanical and electrical infrastructure serving the proposed North Wing Phase B development. These design criteria together with well prescribed performance criteria for the building envelope will also help ensure that the building's energy performance is at least 30-35% superior to a model building as defined under the Model National Energy Code for Buildings.

2.0 SITE SERVICES

- Storm and Sanitary Sewers extended from the Campus Storm and Sanitary Sewer network.
- Utility (Normal) Power extended from the Campus Power Distribution System
- Emergency Power extended from the Campus Central Utilities Plant (CUP)
- Heating & Cooling Energy Supply extended from the Campus Central Utilities Plant (CUP)
    - Chilled Water for Cooling;
        - New Variable Speed Centrifugal Chiller in the CUP
        - 14ºF System ΔT
    - Hot Water for Heating
        - New High Efficiency Hot Water Boiler in the CUP
        - High System ΔT

3.0 MECHANICAL SYSTEMS

3.1 Plumbing

- Domestic Cold, Hot and Recirculation Water System.
- Low Flow Fixtures; Automatic Faucets and Flush Valves
- Gas Fired Domestic Hot Water Heaters

3.2 Fire Protection

- Fire Standpipe and Sprinkler Systems
- Pre-action Sprinklers for Main Electrical Room and Generator Room

3.3 HVAC

- Central Air Handling Systems, Variable Speed Operation
    - Hydronic Heating & Cooling
    - Variable Air Volume with Demand Controlled Ventilation
    - Energy Recovery on 100% Outdoor Air Systems
- Perimeter Heating Loop, Variable Speed Pumping
- Gas Fired Pure Steam Humidification in Air Handling Units

3.4 Building Automation System (BAS)

- Direct Digital Controls
    - Web Based Platform

- Integrated with the Campus Control System / Campus LAN
- Control Strategies
  - Occupancy Schedules
  - Demand Controlled Ventilation
  - Scheduled Temperature Reset Strategies
- Interface with Lighting Control System

3.5 Miscellaneous Systems

- Natural Gas Distribution to support Gas Fired Humidification System and Domestic Hot Water Heater
- Metering, Measurement & Verification System
  - Interface with the existing Enterprise Utility Software

4.0 ELECTRICAL SYSTEMS

4.1 Power Supply

- Utility (Normal) Power Distribution
- Emergency Power Distribution

4.2 Lighting

- Compact Fluorescent and/or LED Lighting
- Daylighting to limit lighting power density
- Occupancy Sensors
- Lighting Control System interfaced with the BAS
- Compliance with Crime Prevention Through Environmental Design

4.3 Fire Alarm

- Addressable Fire Alarm System
- Interfaced with the Campus Security & Monitoring System

4.4 IT and Communications

- Interfaced with the Campus Local Area Network

4.5 Security System

- Interfaced with the Campus Security & Monitoring System
- Access Control
  - All points of Entry and Exit
  - Secure zones within the building.

End of Mechanical & Electrical Design Criteria

Food Services Plan:

University of Toronto Mississauga
Hospitality and Retail Services
North Building Food Service Redevelopment – Phase B

Project Background, Concept and Vision

I. Food Services – Kiosk and Event Support

Currently in Block 'B' of the North Building, there is a Tim Hortons kiosk with a limited menu along with some grab and go food, snack, and beverage items. This outlet currently occupies 12 nasm of space which includes storage, back of house/food and beverage production, food merchandising, and customer queuing space. A similar concept would be ideal for the reconstructed North Building Block 'B' for the following reasons:

- It is a labour efficient concept
- It serves to complement the new North Side Bistro opening in the North Building Block 'A'
- It provides food service operating flexibility for off-peak periods (evening, summer, etc.)

The main intent of this concept is to provide food and beverage options for those who wish to take food away and consume it elsewhere. However, in keeping with the design and feel of the building, the food outlet should contain elements that relate it to the base building design. This outlet should also be supported by minimal but varied types of seating (bistro tables, soft seating) that are not fixed so that they can be removed for events. The seating area will also double as lounge space for the building. In addition, this outlet will serve as a food service staging area for the event space of 350-400 people that is planned for the North Building Block 'B'.

It is anticipated that the placement of the outlet will be on the ground floor of the redeveloped North Building Block 'B' to be adjacent to high traffic areas and to be ideally located as food service event support.

As indicated in the Vision Document for the North Building Café and Lounge located in North Building Block 'A', the North Building Block 'B' project should include space to accommodate an extension of the dining and lounge space in Block 'A'. This extension will allow for an expansion to the existing Block 'A' Café servery elements into the existing common space and/or lounge space to ensure that the expanded Block 'A' Café is sized appropriately for the newly combined North Building.

II. Concept Overview and Vision

The North Building Block 'B' food service outlet should ideally be situated on the ground floor of the building adjacent to the proposed event space but on the opposite side of the building from the Additional Seating Area for Block 'A'. The outlet should also be situation adjacent to the receiving and waste staging areas while simultaneously fronting onto the main traffic areas. Further, the seating area would best be situated in a fashion as to serve as dining space for the outlet and double as lounge space when the outlet is closed.

The service entrance to the kiosk should be adjacent to the main traffic area and the seating area. The delivery entrance to the outlet should be connected to the receiving and waste staging areas by a service corridor and should be hidden from main traffic flow through the building. Deliveries to the outlet will travel down the corridor through the delivery entrance attached to the storage area.

This food service kiosk is to be designed in a fashion that allows the kiosk to be hidden during events but will still allow access from the outlet to the event space for food services to support the event

The Block ‘B’ food service outlet will feature:

- A Nationally Branded coffee kiosk with pastry items and cold beverages
- Grab and Go prepared meals and snacks
- Beverage merchandisers
- Impulse merchandisers

The Additional Seating Area to support the Block ‘A’ Café and Lounge will ideally carry forward some of the design elements from the Block ‘A’ seating area but tie into the design elements of the Block ‘B’ redevelopment as well. Ideally, this space should not be included in the proposed event space and could be maintained separately while the event space is occupied for a function.

III. Development and Implementation

The café will be designed by a consultant team consisting of a food service facility designer under the direction of the University of Toronto Mississauga Hospitality and Retail Services Department and the base building design team.

Key elements of the food service operation design will be:

- simplicity and efficiency in operation
- ability to be ‘hidden’ during special events
- provide enough utility capacity to support food services for special events
- selection of finishes that are complimentary to the building and the national coffee brand, and are comforting and uplifting. These finishes will be:
    - ceramic wall tiles
    - millwork finished in warm colours
    - flooring that is resilient and complimentary to the base building

Links to UofT Standards and Policies:

University of Toronto Design Standards	www.fs.utoronto.ca/aboutus/design.htm
University of Toronto Mississauga (UTM) Standards	(on request)