UNIVERSITY OF TORONTO

UNIVERSITY PLANNING, DESIGN & CONSTRUCTION
CAMPUS & FACILITIES PLANNING

FOR APPROVAL

ITEM 11 – ACADEMIC BOARD – June 3, 2013

TO: Planning and Budget Committee

SPONSOR: Gail Milgrom, Director, Campus and Facilities Planning

CONTACT: 416-978-5515

DATE: April 30, 2013 for May 15, 2013

AGENDA ITEM: 7

ITEM IDENTIFICATION:
Report of the Project Planning Committee for the Relocation of the Department of Nutritional Sciences to the Toronto Medical Discovery Tower

JURISDICTIONAL INFORMATION:
Capital projects over $3 million and up to $10 million will be considered by the Planning and Budget Committee and recommended to the Academic Board for consideration and approval in principle (i.e. site, space plan, overall cost and sources of funds). It is expected that such projects will be placed on the Board's consent agenda and be confirmed by the Executive Committee of the Governing Council. If a project will require financing as part of the funding, the project proposal must be considered by the Business Board.

BACKGROUND:

The Report of the Project Planning Committee was reviewed by the Vice-President and Provost and the Vice-President, University Operations at meetings of the Provost's Advisory Group, and the Executive Committee of CaPS (Capital Projects and Space Allocation Committee) and is being recommended for consideration.

HIGHLIGHTS:

The Department of Nutritional Sciences (DNS), currently in the FitzGerald Building, is planned to be relocated to two floors (14th and 15th) of the Toronto Medical Discovery Tower (TMDT) at the MaRS Centre.

The Department has set an ambitious goal of creating a new *Institute of Food, Nutrition and Health* to be housed in a world-class, large-scale research facility. The new *Institute* will allow researcher, clinicians and population health experts to collaborate and share their complementary expertise in consumer behavior, nutrition, genetics, communication and public health policy. Moreover, a multidisciplinary team with expertise in food and nutrition policy, nutritional sciences, public health policy, genomics, agriculture and economics will allow critical mass to be built for all levels of research value chain. The goal for the critical mass is to become a catalyst for action within the current system.

After conducting a high level assessment of the Department's assets, the Department believes that its current infrastructure represents the biggest impediment to establishing a world-class institute. The Department is currently located in 2,036 nasm in the Fitzgerald Building and, due to the lack of campus based space, some research facilities are also located in Toronto Academic Health Sciences Network (TAHSN) hospitals.

Consequently, the purpose of the Department relocation is to alleviate the current shortage of space in a technologically outdated building, bringing all the department into one location, and moving forward to maximize faculty resources in new state-of the art human subject study facilities and research facilities (namely wet, dry and clinical).

Facilities Management & Space Planning, Faculty of Medicine have been working with the Department of Nutritional Sciences to find sufficient and suitable space and investigations into available options have included:

1. Discussions and investigations with St. Michael's hospital. Multiple locations on the St. Michael's hospital campus were reviewed and found inadequate for a various reasons which include insufficient space for the entire department and lack of access to animal facilities in some locations.
2. Discussions and investigations with the Michener Institute to lease a vacant floor for research. Besides the floor area being insufficient with the additional required space located somewhat remotely in the complex, an engineering investigation indicated that research could not be supported on the floor in question (report available upon request).
3. MaRS Centre Phase 2 (close to completion). Preliminary investigations eliminated this as an option due to the lease cost.
4. University Health Network (UHN), Toronto Medical Discovery Tower (TMDT).

A preliminary study of the two available TMDT floors, proposed for this project, suggests that sufficient capacity exists to accommodate the DNS research and administrative needs, however, some flexibility may be required to access teaching and seminar space. Only minor renovations to the space are required to accommodate the program needs of the Department.

No other research suitable space was identified in downtown Toronto. Indeed, the TAHSN partners have been building research towers to support their own requirements. These include, St. Michael's Li Ka Shing Knowledge Institute, UHN Western Hospital, Krembil Discovery Tower and SickKids Hospital Research and Learning Tower. UHN's TMDT has been evaluated as appropriate in size, type and location for Nutritional Sciences.

The space planning principles of the Faculty of Medicine and the space guidelines of the Council of Ontario Universities (COU) were used to generate a "requirement" for 3,155 nasm The proposed space program at the TMDT of 2,837 nasm is in line with this COU benchmark. At 90% of COU, this is a significant improvement over existing space, which is 2,036 nasm or 65% of COU generated space

UHN currently leases the entire Toronto Medical Discovery Tower (TMDT) from MaRS for a 30 year term at preferred lease rates. UHN has been sub-leasing 5 of the 15 floors to SickKids Hospital while their research tower was under construction. With their tower nearing completion and SickKids vacating, the opportunity to sublease some of that space arose. A review of the quality, quantity and location showed it to be a good match for the needs of Nutritional Sciences and the University at the request of the Faculty submitted a Letter of Intent to lease 2 of the 5 floors for 10 years at cost.

When SickKids subleased the space from UHN, it included a requirement that UHN purchase the depreciated value of the fit out (tenant improvements) when they vacate. As a term of the lease, UHN will require this cost to subsequently be paid by the Faculty.

As part of the lease negotiations, UHN will submit proof sufficient to the University that the original tender process for the fit out was in compliance with Ontario Government procurement standards at the time, the original tendered price, final construction price, and the depreciation calculation. It is recommended that a similar clause be negotiated for UHN's subsequent purchase of the fit out cost from the University when the University vacates the space.

The cost of the fit out represents the cost to construct the interior walls, floor and ceiling finishes, light fixtures, etc. from the shell building space. This includes the modular benching in the open laboratories, but excludes furniture.

The furniture and existing lab benching, is to be purchased from SickKids as part of the lease agreement. UofT (Faculty of Medicine) is to purchase all existing laboratory benching and leasehold improvements (i.e. walls, doors, ceilings, electrical, mechanical etc.) subject to cost verification by UHN and acceptance by UofT. The purchase price is to be paid to UHN at the lease commencement scheduled for September 1, 2013. The amount being charged is at cost, and is the depreciated value of appropriately tendered fit out/ tenant improvements undertaken by the Hospital for Sick Children and is a non-negotiable lease cost.

It is projected that the lease and renovations of the two floors in TMDT will commence at the same time on September 1, 2013. Renovation/construction completion is planned for November 1, followed by lab fit-up and commissioning allowing move-in and occupancy on November 15, 2013.

Funding for the project will be provided by the Faculty of Medicine from their allocation of Graduate Expansion funds. However, the Faculty has launched a Capital Campaign for this project and, as funds are raised, will replace the Graduate Expansion funding with Campaign funds.

RECOMMENDATION:

Be It Recommended to the Academic Board:

1. THAT the Project Planning Committee Report, dated April 24, 2013, for the planning, renovation and relocation of the Department of Nutritional Sciences from the FitzGerald building to two floors of the Toronto Medical Discovery District Tower at MaRS Discovery District 2,835 nasm (5,076 rentable square meters) be approved in principle; and

2. THAT the project scope as identified in the Project Planning Committee Report be approved in principle to be funded by a combination of Graduate Expansion Funds and Capital Campaign funds to be raised.

PROJECT PLANNING COMMITTEE REPORT

DEPARTMENT OF NUTRITIONAL SCIENCES RELOCATION TO TORONTO MEDICAL DISCOVERY TOWER

Facilities Management & Space Planning
Faculty of Medicine, University of Toronto

April 29, 2013

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EXECUTIVE SUMMARY

The Department of Nutritional Sciences (DNS), currently in the FitzGerald Building, is planned to be relocated to two floors (14th and 15th) of the Toronto Medical Discovery Tower (TMDT) at the MaRS Centre.

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After conducting a high level assessment of the Department's assets, the Department believes that its current infrastructure represents the biggest impediment to establishing a world-class institute. The Department is currently located in 2,036 net assignable square meters (nasm) in the Fitzgerald Building and, due to the lack of campus based space, some research facilities are also located in Toronto Academic Health Sciences Network (TAHSN) hospitals. Consequently, the purpose of the Department relocation is to alleviate the current shortage of space in a technologically outdated building, bringing all the department into one location, and moving forward to maximize faculty resources in new state-of the art human subject study facilities and research facilities (namely wet, dry and clinical).

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II. PROJECT BACKGROUND

Membership

Mary L'Abbé, Chair, Department of Nutritional Sciences (DNS), Faculty of Medicine
Harvey Anderson, Professor, DNS, Faculty of Medicine
David Jenkins, Professor, DNS, Faculty of Medicine
Valerie Tarasuk, Professor, DNS, Faculty of Medicine
Richard Bazinet, Associate Professor, DNS, Faculty of Medicine
Ahmed El-Sohemy, Associate Professor, DNS, Faculty of Medicine
Tony Hanley, Associate Professor, DNS, Faculty of Medicine
Chuck Chen / PhD Graduate student
Christina Wong/ PhD Graduate student
Vijay Chetty, Business Officer, DNS, Faculty of Medicine
Sarah Birtles, Planner, Campus and Facilities Planning
George Phelps, Director Project Development, Real Estate Operations
John Smegal, Real Estate Analyst, Real Estate Operations
Heather Taylor, Director, Facilities Management & Space Planning, Faculty of Medicine

Former members:
Eugene Adach (Secretary), Senior Facilities Planner, Faculty of Medicine

Terms of Reference

The Project Committee must address the following items:

1. Make recommendations for a detailed space program to accommodate the academic, research and administrative, activities of the Department of Nutritional Sciences at the Toronto Medical Discovery Tower.

2. Demonstrate that the proposed space program will take into account the Council of Ontario Universities' and the University's own Space Standards.

3. Plan to realize maximum flexibility of space to permit future reallocation as programmatic needs change.

4. Determine the secondary effects of the project and the resource implications of relocating activities as required.

5. Identify the shorter and longer range plans for vacated space at the FitzGerald Building.

6. Determine a total project cost (TPC) estimate for the project, including costs of implementation in phases if required, and costs associated with secondary effects.

7. Identify all sources of funding for the capital project and anticipated increased operating costs once the project is complete.

8. Report by January 2013. Note: revised date May 2013

Background Information

The study of household science as a discipline at the University of Toronto has its origins with the Lillian Massey School of Household Science and Art established in 1896. In 1902 the school became the Department of Household Science within the University of Toronto. The Department was formally established in 1906 as the Faculty of Household Science and has been housed in Lillian Massey building since 1912.

The Faculty building was named after Lillian Massey Treble, who donated half a million dollars towards its construction. The building was on land owned by Victoria College and later designated by the City of Toronto as a Heritage building.

From 1906 to 1962, the Faculty included some of the first female academics in Canada, namely Annie Lewisa Laird and Clara Cynthia Benson. They were among first women awarded a doctorate at University of Toronto and among the first female Faculty members who achieved the rank of associate professors. Dr. Laird directed the Household Science and Dr. Clara Benson the Food Chemistry Department.

In November 1962 the Faculty's name was changed to Faculty of Food Sciences. Dr. Barbara MacLaren was the Dean of the Faculty from 1962 to 1970. Professor Ava Armstrong followed as Acting Dean until 1975.

In 1975 a major reorganization caused the Faculty of Food Sciences and the School of Hygiene to be discontinued. The non-laboratory Departments of the School of Hygiene were reformulated as the Division of Community Health in the Faculty of Medicine. The nutrition and food chemistry staff of the Faculty of Food Sciences and staff of the Department of Nutrition were merged into a new Department of Nutrition and Food Sciences within the Basic Science Division of the Faculty of Medicine and with Dr. G.H. Beaton as Department Chair. They then relocated to their present location in the FitzGerald Building.

The Department was renamed once again in 1980 to the Department of Nutritional Sciences under the chairmanship of Dr. Gerald Harvey Anderson.

Statement of Academic Plan

Issues with respect to food and nutrition are at the forefront of today's health, food security, climate change, and economic agendas. Public interest and awareness of nutrition's link to these world issues is growing. Canadians and populations around the world are not as healthy as they should – and can – be. While population health is known to be a key driver of economic prosperity and quality of life, our healthcare system is centred on treating illness rather than keeping people remaining healthy. This system is not sustainable; the rising prevalence of chronic disease and cost of acute interventions is creating financial and capacity constraints on the delivery of our health care, and is squeezing out governments' ability to fund other critical investments like education and infrastructure.

For more than 80 years, the Department of Nutritional Sciences (DNS) has been at the forefront of knowledge generation and application that has meaningfully and measurably enhanced the health, wellness and prosperity of Canadians and populations around the globe. Today the department boasts over 60 highly accomplished faculty members that have received numerous distinguished awards and are recognized as global leaders in nutrition. Faculty interests span basic science to clinical investigation to population health, and represent the ideal translational model of research, from genes

to populations. The work of the DNS has led to important discoveries and application of nutrition research; examples include the invention of pablum, a nutrient fortified baby food, which decreased the high incidence of nutritional rickets and the invention and clinical use of 'Sprinkles', a home-fortification approach to combat iron-deficiency anemia to decrease non-reversible developmental delay in infants in developing nations.

The Department of Nutrition is well known at the local, national and international level for being a leader in pushing the bounds of nutrition through research, clinical investigation and public health policy. It has a reputation from students that places it amongst the most desirable schools in North America and has a track record of developing leaders in the field of nutrition. The department is committed to not only attracting the best students but also providing them with excellent training and an enriching environment for conducting first class leading edge research in the field of nutrition.

The DNS resides within the Faculty of Medicine at the University of Toronto. This positioning creates unique opportunities for collaboration with the highest concentration of university-affiliated hospitals, clinicians and health researchers in North America. Toronto is also a first-class environment for conducting leading-edge research. It is home to the largest R&D hub in Canada, the second largest food cluster in North America and a high-density of highly qualified personnel.

The Department, however, has arrived at a watershed point. While DNS is ideally suited to take a leadership role in advancing the state of nutritional knowledge and application required to address several urgent world issues, the Department, as it operates today, is not equipped to do so. The Fitzgerald building, built in 1927, does not provide the necessary space, infrastructure, or scientific equipment capabilities to allow the Department's researchers to realize their full capabilities.

Composed of Approximately 374 Members (2012-2013) identified as headcount:

- 60 Faculty (21 Primary Appointed; 15 Status Only Appointed; 24 Cross Appointed)
- 295 Students (Undergraduate Majors, Masters and PhD Students)
- 19 Staff (Administrative and Research)

Active in Student Training (2012-2013) identified as headcount:

- 188 Undergraduate Students majoring in Nutritional Sciences (2^{nd} year - 56, 3^{rd} year – 54, 4th year - 78)
- 1,511 Undergraduate Students enrolled in Nutritional Sciences classes
- 24 MPH Students
- 12 MPH-Advanced Standing Students
- 36 MSc Student
- 35 PhD Students

Nutritional Sciences is recognized for its excellence in teaching and incredibly strong faculty/ student base. Over the past 8 years, faculty has won over 20 major awards, including three Canada Research Chair awards and three elected Fellows of the American Society of Nutritional Sciences. More DNS faculty members have served on Dietary Reference Intake panels of the Institute of Medicine of the U.S. National Academies than any other nutrition Department in North America.

The faculty provides leadership on numerous national and international policy forums and expert panels. Nutritional Sciences' graduate students have in recent years been awarded more CIHR and NSERC graduate student scholarships than any other nutrition department in Canada.

The Department of Nutritional Sciences is recognized for its high quality and breadth of research and proven success in attracting competitive funding, as well as publishing high quality research. The Department is uniquely located in Toronto's R&D health and food clusters. Currently, the Department has active partnerships with:

- The Dalla Lana School of Public Health
  Amongst many other Departments in the University;
- Influential hospitals
  St. Michael's, Hospital for Sick Children, Toronto General/ University Health Network, Baycrest and Mount Sinai;
- Other universities / research institutes
  University of Alberta, University of Guelph and Ryerson University, Laval University;
- The food R&D community;
- The Ontario and Federal Governments;
- Health charities and non-governmental organizations; and
- International organizations
  Such as the World Health Organization, Pan American Health Organization, International Life Sciences Institute.

For the near future the Department has resources to expand its tenure stream faculty by 30% and demands on it for graduate and undergraduate courses continue to increase. Research funding opportunities continue to expand in its area of expertise. For example, CIHR just recently announced $10.2M in priority funding in 2012 for Food & Health in recognition of the importance placed on this area of research.

After conducting a high-level assessment of its assets, and preparing a detailed Department Strategic Plan in 2010, the Department believes the primary limiting factor in achieving its potential is its infrastructure. The FitzGerald building, built in 1927, does not provide the necessary infrastructure of HVAC, plumbing, electrical or scientific equipment capabilities to deliver cutting-edge research, and allowing the Department's researchers to realize their full capabilities or to meet its expanding teaching programs. Furthermore facilities for preparing foods, feeding study subjects and space for study participant interviews and dietary assessments are woefully inadequate.

Space Requirements

The Department of Nutritional Sciences is currently accommodated in 2,036 nasm at the FitzGerald Building (150 College Street), DNS, the largest single tenant spread over five floors, fully occupies floors 3 and 4, partially occupies floor 1 and sub-basement, and occupies a portion of the basement level. The Department has additional space in the Medical Sciences Building for 15 Freezers which would be relocated to TMDT.

As TMDT cannot accommodate the animal research work, that will remain in the Department of Comparative Medicine in the Medical Science Building. A major renovation for a CFI laboratory under Nutritional Sciences in the Medical Sciences Building is not captured in the space allocated summary and is not planned to relocate.

Some of the DNS researchers have expanded their labs into various hospital spaces for their clinical research. This is proposed to be consolidated and relocated as part of this Planning project.

A detailed utilization analysis of the Department's space requirements was undertaken using the Council of Ontario Universities space guidelines. The Council of Ontario Universities space guidelines, also known as the Building Blocks space standards, are the current benchmarks used routinely within the Ontario university system to determine space requirements at a campus level. They consist of three components: a space classification scheme that describes the wide range of facilities that make up a university's physical plant; a series of input measures to serve as proxies for space demand and which are sensitive to changes in enrolments, numbers of faculty and staff and academic programs; and space utilization factors that predict space requirements based on assumptions regarding target use and size of facilities. These guidelines are particularly well suited for campus master planning exercises as they take a holistic approach to a wide range of campus needs. At the University of Toronto, the approach has been taken to adopt and adapt the COU space standards when used at a divisional level. They are always part of a responsive, objective process of analysis which is site specific and tailored to the individual unit being reviewed. The goal is to be standardized enough to provide not only a consistent but also an equitable approach to different types of facilities planning – whether for new construction, renovation or reallocation of facilities.

For the Department of Nutritional Science, the COU guidelines were applied using the input measures listed below (accounting for growth) in the Department Profile. *Also Refer to Appendix B.*

	FTE
Faculty	16.85
Emeriti	4.00
Post-doctoral Fellows	8.8
Research Associates	4.2
Administrative	5.30
TOTAL	**39.15**

Students

There are 85.9 FTE graduate students consisting of 50.9 FTE Master level students (Master of Public Health specializing in Community Nutrition, and graduate research degrees M.Sc.) and 35 Ph.D.

Current and proposed space for the Department fall under two categories: Research and Office space.

	Generated Space 2011/12 Nasm	Existing Inventory Nasm	%I/G	Proposed Nasm	%I/G
Wet Research Lab	1,124				
Clinical Research Lab	480				
Dry Research Lab	184				
Total Research	**1,788**	**1,206**	**67%**	**1,845**	**103%**
Faculty Office	252	264	105%	231	92%
Research Office/Project Space*	525	120	23%	215	41%
Grad Student Office	352	173	49%	270	78%
Non-Academic Staff Office	69	118	171%	35	51%
Office Support Space	168	155	92%	158	94%
Other-Locker Rooms				56	
Total Office	**1,367**	**830**	**61%**	**964**	**71%**
Total Academic Facilities	**3,155**	**2,036**	**65%**	**2,837**	**90%**

*Research Office/Project Space area includes 102 nasm (a 50% proration of Flex Rooms identified in the program as Flex Rooms

Overall, the proposed space (2,837 nasm) is in line with the COU benchmark (3,155 nasm). At 90% of COU, this is a significant improvement over existing space, which is 2,036 nasm 65% of COU generated space.

Location and Space Investigations

Facilities Management & Space Planning, Faculty of Medicine have been working with the Department of Nutritional Sciences to find sufficient and suitable space to fulfill the academic plan. Due to the lack of campus based space, some research is currently located in Toronto Academic Health Sciences Network (TAHSN) hospitals. The Departmental academic plan identifies reuniting the Department in one location and investigations into available options have included:

1. Discussions and investigations with St. Michael's hospital. Multiple locations on the St. Michael's hospital campus were reviewed and found inadequate for a various reasons which include insufficient space for the entire department and lack of access to animal facilities in some locations.
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III. PROJECT DESCRIPTION

Vision Statement

In 2010, under the leadership of Dr. Mary L'Abbé, the newly recruited Chair, the Department launched a strategic planning process to create a road map of strategies and goals to guide DNS for the next 5-10 years. Its vision, mission key strategies and objectives have been defined.

VISION: Nutrition as a key driver for individuals and populations to enhance their health, wellness and prosperity.

MISSION: To be the preeminent institution in North America improving health through research, teaching, and leadership in human nutrition from genes to populations.

Strategy

The strategic plan defined 3 strategies to achieve this overarching objective. They represent a synthesis of the key themes that emerged during wide-spread consultation and with the participation of the Department throughout the entire strategic planning process, including several faculty meetings and a staff/faculty retreat.

Strategy 1: Revitalize our Research Enterprise –

The department is focusing its research platforms while developing a breadth and scope of academic practice. The platforms will form anchors for us to add capacity around, such as faculty recruitment, expanded academic programs, new funding sources and more strategic partnerships.
Strategy 2: The Best People and Partnerships

The historic success of the department has been founded on the high quality of its faculty, students and partners, including neighbouring hospitals, industry players and other research institutions
Strategy 3: Cement our Foundations for Growth

This strategy focuses on Building the right set of physical, financial and operational infrastructure to enable our vision for growth; the expansion to state-of-the–art facilities is central to this strategy.

Objective

The Department has developed 8 specific objectives to guide its academic activity from 2011-2015. These objectives are aligned with the academic plan of the University and the strategic plan of the Faculty of Medicine.

Objective 1: Focus and prioritize research platforms

Building on the Department's current research strengths and its vision for the future, four core research platforms were identified. These form not only the basis of current excellence, but they also focus the Department's efforts for strategic growth, allowing it to effectively target its resources and optimize its capacity to develop, teach and apply nutritional science research into the future.

Objective 2: Build breadth and scope of academic practice

The Department has created a breadth and scope of academic practice that does not exist in any other Canadian department of nutrition. The Department plays a pivotal role in educating academic, industrial, government and political leaders as well as the public.

Objective 3: Build critical mass of strategic partnerships

Currently, the Department's partnerships with neighbouring hospitals, industry, the Dalla Lana School of Public Health, and other stakeholders have created opportunities to foster and apply leading research through the sharing of resources.

Objective 4: Build the best faculty

The success of the Department – in terms of scholarly research, competitive educational programs awards and recognition, and external research support – is fundamentally the result of the high quality of its faculty.
Objective 5: Enrich the student experience

The Department of Nutrition has a reputation from students that places it amongst the most desirable schools in North America and has a track record of developing leaders in the field of nutrition.

Objective 6: Expand to state-of-the-art facilities

The limiting factor to sustaining the DNS's established world-wide recognition is the lack of facilities for research and teaching,

Objective 7: Attain Sustainable Funding for growth

The Department has a track record of maintaining a solid financial foundation through sound financial management.

Objective 8: Enhance supporting processes for growth

The Department has identified key priority areas where enhanced organizational processes would help achieve its growth objective.

Space Program

Consistent with the Department of Nutritional Science's vision, strategic objectives and academic plan, it is proposed that the department relocate from the FitzGerald Building and other subsidiary spaces to the available floors 14 and 15 of the Toronto Medical Discovery Tower at 101 College Street. The floors are fitted with much needed research infrastructure and flexibility in the space program will allow efficient use of the various spaces that are suitable for research, administration and functional support rooms.

NXL Architects was retained by the Faculty of Medicine, Office of Facilities Management and Space Planning in 2011 to prepare an architectural programme for the research wet labs component of the overall architectural programme, the process entailed a detailed analysis of the department's research space needs and recommendations were made with regards to space requirements, adjacencies and capacities. *Appendix D. Wet Labs Architectural Programme, August 2011 is available upon request.*

The nominal space program takes into account the functional requirements generated in the NXL report and defines areas that can be most efficiently maximized by either combining uses or creating flexible spaces that can accommodate more than one planned function.

The proposed program for the Department of Nutritional Sciences is 2,837 net assignable square meters (nasm). The space program is shown in detail in the following table and described below.

Administrative Space

- Academic offices are to utilize existing office space where possible.
- Academic offices are to be located by both *discipline* and *research lab* wherever possible.
- Locate faculty offices as close to their respective labs as is feasible.
- Non academic offices will be a combination of both private offices and workstations.
- Student Study space will be utilizing existing single workstations.

Administrative Support Space

- Admin. support spaces will include a variety of flexible meeting rooms of various capacities and flexible furniture solutions to allow for multiple functions.
- Support spaces to include, and utilize where existing and suitable, reception areas, kitchen/ lunch room, mail/copy/supplies, file storage, equipment storage and general storage.

Research Space

- Required equipment rooms will be consolidated based on functional requirements.
- Labs that require controlled environments can be used as multipurpose labs to allow flexibility of use.
- Space to be allocated for Freezers.
- Program specific labs to be accommodated in existing layouts where possible.
- Research support space to include: work rooms, cold rooms, ice machine alcoves, glass stock rooms and various program specific and general storage rooms.

Department of Nutritional Science - Nominal Space Program

Room Description	Qty	Area (nasm)	Total (nasm)
Administrative Spaces			**649**
Academic Offices			
Single Faculty Office, Chair	1	22	22
Single Faculty Office	16	11	176
Single Emeritus Faculty Office	2	11	22
Shared Emeritus Faculty Office	1	11	11
Study Coordinator Spaces (Research)	13	5	65
Collaboration / Project Space / Work room (Research)	2	10	20
Project Room (Research)	1	8	8
File Storage (Research)	2	10	20

Non Academic Office

Departmental Reception	1	6	6
Single Administrative Offices	1	11	11
Workstations	3	6	18

Grad Student Offices

Single workstations	81	3	243
Touch down / hoteling workstations	9	3	27

Admin Support Space **343**

Admin Waiting	1	6	6
Clinical Reception & Waiting area	1	14	14
Large Flex Room (25 seats) (with room dividers)*	2	38	76
Medium Flex Room (12 seats)*	4	20	80
Small Flex Room (8 seats)*	6	8	48
Kitchen / lunchroom	2	15	30
Mail, Copy and Supplies	1	10	10
Administrative File Storage	1	10	10
General Equipment Storage	1	10	10
Locker Room	2	28	56
Coat Room	1	3	3

*Also used by Researchers.

Research Space **1,845**

Research Study Food Prep & Storage	1	60	60
Prep Kitchen with 2 work centers	1	40	40
Refrigerator/Freezer Room (Food Storage)	1	20	20
Dry Goods Storage Room	1	10	10
Sensory Rm/Feeding Station (6 stations)	1	15	15
Anthropometric Measurement Station	1	3	3
Vascular Assessment Room	2	8	16
Neurocognitive testing	1	8	8
Retinal Scanner Room	1	8	8
Exercise Room	1	15	15
Exam/Mock MRI Room	2	8	16
Radioisotope Lab	2	24	48
Radioisotope Instrument Room	1	24	24

Fecal Processing	1	8	8
Blood Processing	1	8	8
Phlebotomy Room	1	6	6
Vitamin Lab	1	10	10
Milk Preparation Lab	1	10	10
Small Tissue Culture 1	2	19	38
PCR Prep	2	19	38
PCR	2	19	38
Microscopy / Imaging	1	16	16
Analytical Lab	1	25	25
Darkroom	1	11	11
Centrifuge Facility	1	20	20
Analytical Instrument Room	1	24	24
Analytical Equipment Room	1	24	24
General Open Labs	2	500	1,000
Cold Room	1	12	12
Wet Lab Freezer Farm (Research freezers)	2	42	84
Secondary Freezer space	4	7	28
Climate Controlled Equipment Room	1	24	24
Wet Lab Equipment Room	2	24	48
Wet Lab Instrument Room	2	24	48
Ice Machine Alcoves	3	2	6
Label Processing Room	1	20	20
Glass Stock Room	2	8	16
Total Nominal Space Program			**2,837**

Building Considerations

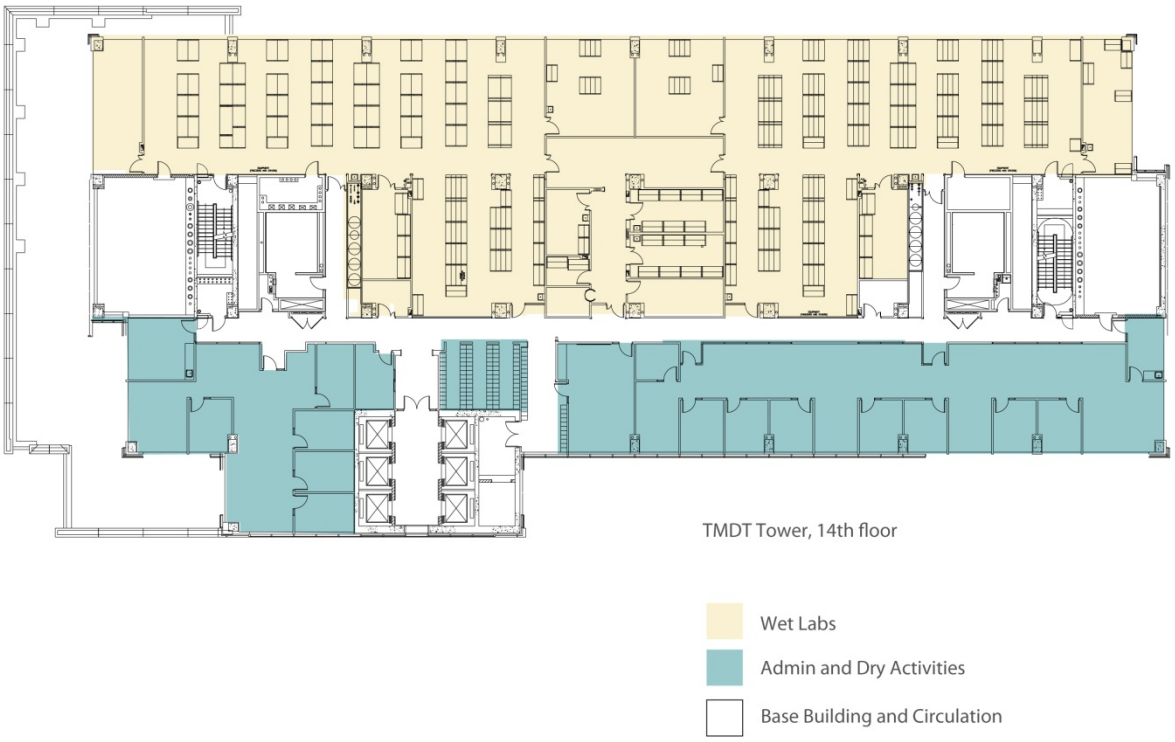
TMDT is located at 101 College Street, near the intersection of University Avenue and College Street within a short walk of the St. George campus. It is a 15 storey research laboratory building with a street level concourse, two levels of underground parking and a loading dock that provides receiving and shipping services for TMDT and MaRS.

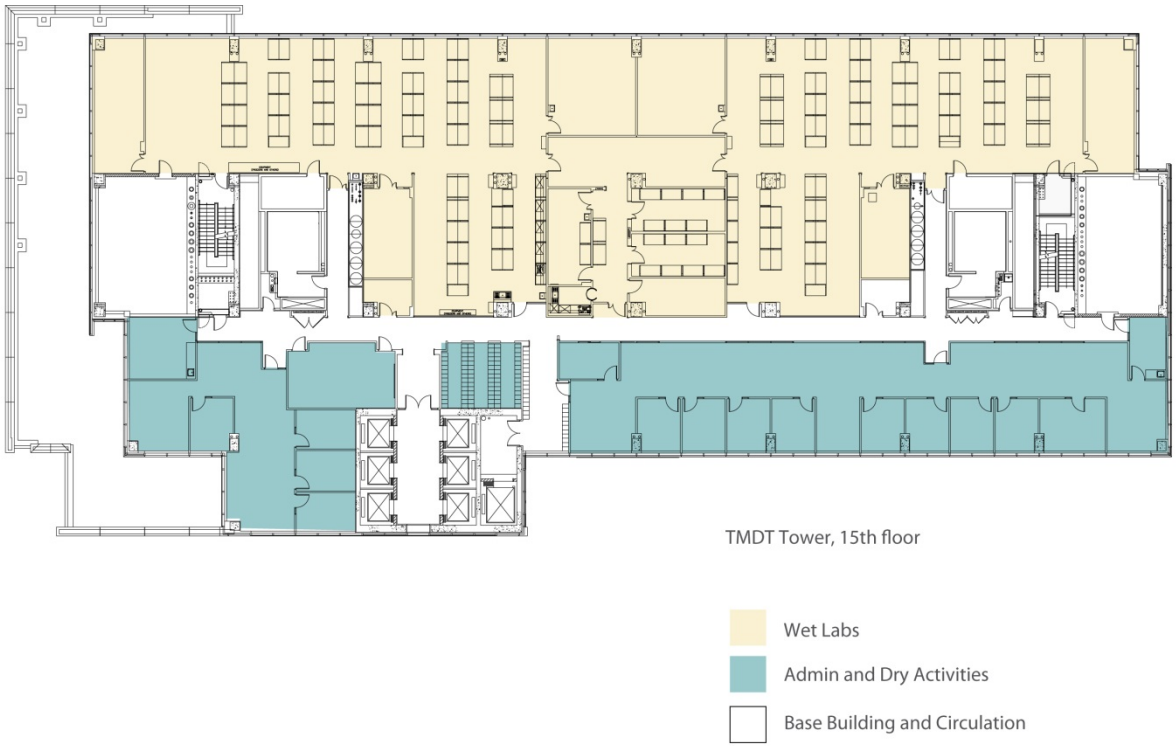
Construction on the base building started in 2002 and interior fit-out started in late 2003. The interior fit-out which started in 2003 and was divided into two phases:
Phase one – Floors 2-5, 8-9, and 13-15 – Occupied Sept 2005
Phase two – Floors 6-7, 10-12 – Occupied Sept 2006

The building exterior utilizes a curtain wall enclosure to allow as much natural light into the building as possible from all compass points. The building was designed as a dedicated research laboratory building. Interior construction is state of the art for laboratories. Laboratories on floors 2-5 and 8-15

are built to Biological Containment Level 2 (PHAC), while interior construction for the 6th floor and majority of the 7th floor is based on Biological Containment Level 2 (PHAC) and CCAC Standards. Mechanical systems on each floor utilize variable air volume air delivery to ensure air adequate flow and balance.

Building Floor Diagrams, refer to Appendix E for larger size diagrams.





Building Construction

The Toronto Medical Discovery Tower utilizes a rectangular shaped floor plate with three building cores: a central service core comprised of 6 passenger elevators and 1 service elevator; and two exit stair/ mechanical cores separated from one another along the long axis of the building. The building structure is supported by caisson foundation drilled down to bedrock. The building frame is constructed of reinforced concrete columns, beams and floors. Designed floor loading utilizes live loads of 75 psf in the office areas, and 150 psf in laboratories. Typical floor-to-floor height is 4.4m and typical column spacing is 9.6m.

The mechanical needs of the building are met through the use of two independent air handlers furnished on each floor – one for the north half and one for the south half of the building – to supply 100% fresh air to the laboratories and building spaces. Exhaust is central type with all f loor and general fume hood exhausted through a central riser to strobic fans on the roof. In addition, separate dedicated and exhaust risers are furnished for radioisotope fume hoods and medicinal chemistry fume hoods.

Key Building Components

- Two 1200 kW generators are furnished for building emergency power needs and are capable of providing approximately 25% of the total building load.
- Key mechanical air handlers and building systems are on emergency power.

- Laboratories have emergency power for refrigerators, freezers, incubators and other key equipment.
- Steam is purchased from the primary service provider – Enwave.
- Central plumbing includes:
  Reverse osmosis (RO) water
  Domestic hot & cold water
  Carbon dioxide (CO2)
  Nitrogen
  Vacuum
  Laboratory compressed air
  Natural gas
- Access control for the building in achieved through:
  Card access by card reader during the evening and weekends or via the front Security desk in the lobby at the main entrance of 101 College St.
  Elevators may be programmed to have card control access to each floor.
  Each floor has card control access from the elevator lobbies (passenger and service).
  Laboratories have card access into the main areas.
- Security services are provided 24/7/365 with walking patrols evenings and weekends.
- Housekeeping services are provided Monday-Friday with removal of waste, recyclables and cleaning as per agreed upon scope and schedule

Sustainability design and energy conservation (LEED)

Although the building was not initially constructed to LEED standards, a post construction review of the building has indicated the building could readily be accredited with the potential of attaining LEED Silver status.

Environmental Health and Safety

Lighting is managed with occupancy sensors in all areas however private offices have the manual overrides. Schedules are in place to ensure that lights are turned off overnight. Emergency lighting is provided as required per the Ontario Building Code. TMDT is registered through MaRS with the Ontario Ministry of Environment and has a Certificate of Compliance detailing use of chemicals and base building mechanical systems. Chemical hazards are managed through utilization of variable flow fume hoods and UHN's 'Shut the Sash' program ensures fume hoods are closed when not in use. Chemical storage for hazardous solvents and acids are provided with fume hoods, however additional storage if required is to be provided by research teams. Biological containment is achieved through use of recirculating Biological Safety Class II Cabinets. Loading dock staff receives annual training on the hazards of materials typically received and used in a research laboratory building. Spill kits are maintained and available in the loading dock area.

Secondary Effects

Nutritional Sciences occupies 2,036 nasm of space in the FitzGerald building. As the largest single occupant in FitzGerald, the relocation of the entire Nutritional Sciences department to TMDT will leave a sizeable portion of the FitzGerald building vacant and available for other tenants and uses. The Faculty of Medicine will retain the newly available space for short term swing space. The costs associated with the use, renovation and/or furnishing of the swing space are outside the scope of this project.

Department of Nutritional Science researchers currently use animal facilities located in MSB when required, including animal prep rooms, animal procedure rooms, animal holding rooms, etc. Animal facilities currently available in MSB for use by Nutritional Science researchers are not available in TMDT. UHN manages and makes available animal facilities in TMDT and advises that animal facilities are currently at full capacity. MSB will continue to provide animal facilities and dedicated space to Nutritional Sciences for research use.

Schedule

It is projected that the lease and renovations of the two floors in TMDT will commence at the same time on September 1, 2013. Renovation/construction completion is planned for November 1, followed by lab fit-up and commissioning allowing move-in and occupancy on November 15, 2013. Significant planning activities such as consultant selection, consultant design, construction tender & award, pre-move planning & scheduling must begin earlier in the years in order to maintain the projected time line. The following is the planned schedule:

Architect/consultant RFP issue	April 15, 2013
Architect/consultant selection complete	April 19, 2013
Planning and Budget Committee approval	May 15, 2013
Tender issue	July 11, 2013
Contract award	Aug. 22, 2013
Lease starts/ renovation starts	Sept. 1, 2013
Renovation completion	Nov. 1, 2013
Lab fit-out & commissioning complete; DNS move-in	Nov. 15, 2013

IV. RECOMMENDATIONS

Be It Recommended to the Academic Board:

1. THAT the Project Planning Committee Report, dated April 29, 2013, for the planning, renovation and relocation of the Department of Nutritional Sciences from the FitzGerald building to two floors of the Toronto Medical Discovery District Tower at MaRS Discovery District 2,835 nasm (5,076 rentable square meters) be approved in principle; and

2. THAT the project scope as identified in the Project Planning Committee Report be approved in principle to be funded by a combination of Graduate Expansion Funds and Capital Campaign funds to be raised.

V. APPENDICES

A. Existing Space Allocation, On Campus

B. Projected Full Time Equivalency (FTE) Summary

C. Council of Ontario Universities Review Generated Space Analysis

D. Wet Labs Architectural Programme, August 2011 prepared by NXL Architects (available upon request)

E. 14th and 15th Floors, Toronto Medical Discovery Tower

F. Total Project Cost Estimate (available upon request to limited distribution)

G. Room Data Sheets (available upon request)

H. Letter of Intent, Proposed Sublease between The Governing Council of the University of Toronto (the "Subtenant") and University Health Network (the "Sublandlord") for space at 101 College Street, entire 14th and 15th Floors, Toronto (the "Premises") (available upon request to limited distribution)

I. Links to U of T Standards and Policies, Department of Nutritional Sciences, Program in Child Nutrition and Health Promotion and Faculty of Medicine.

Appendix A. Existing Space Allocation, On Campus

COU Cat. #	Category	Area (nasm)
3.1	Research laboratory space	715.36
3.2	Research support space	490.85
	Total Research Lab + Support	**1,206.21**
4.1	Academic office space	264.14
4.2	Research office / project space	120.05
4.3	Graduate student office space	172.48
4.4	Department admin & support staff office space	118.32
4.5	Office support space	155.24
	Total Office Space	**830.23**
	TOTAL	**2036.44**

Appendix B. Existing and Projected Full Time Equivalency (FTE) Summary

Faculty and Staff

The Department of Nutritional Sciences has complement of 59.85 FTE faculty, including 16.85 Primary Appointed (including 1.0 FTE for an approved new hire), 4 Emeritus, 15 Status Only and 24 Cross Appointed. Status Only and Cross Appointed are not included for space planning purposes. There is a total of 19 staff comprised of 5.30 Administrative and 13.00 Research. The combined total for the planning input measure is 39.15.

	FTE
Faculty	16.85
Emeriti	4.00
Post-doctoral Fellows	8.8
Research Associates	4.2
Administrative staff	5.30
TOTAL	**39.15**

Students

There are 85.9 FTE graduate students consisting of 50.9 FTE Master level students (Master of Public Health specializing in Community Nutrition, and graduate research degrees M.Sc.) and 35 Ph.D.

Appendix C. Council of Ontario Universities Review Generated Space Analysis

Using the FTE input measures above, the space generated utilizing COU guidelines is:

COU Generated Space Summary		**Space Generated per COU**
Category No.	**Category**	**(nasm)**
3.0 Labs	Wet Research Lab + Support	1,124.35
	Clinical Research Lab + Support	479.56
	Dry Research Lab + Support	183.87
	Total Research Lab + Support	**1,787.78**
4.0 Office	Faculty	251.91
	Research Appointments*	525.20
	Non- Academic Support Staff	68.90
	Graduate Students	352.40
	Office Support Space	168.25
	Total Office Space	**1,366.66**
	TOTAL	**3,154.44**

*Research office space is generated utilizing 27.5 Research-funded staff as an input measure, in addition to PdF and Research Associate FTE identified in Appendix B. While the COU analysis generates 525.2 nasm for Research offices, UofT typically assigns 2 PdFs to an office. The adjusted total is 469 nasm.

Appendix D. Wet Labs Architectural Programme, August 2011 prepared by NXL Architects

(available upon request)

Appendix E. 14th and 15th Floors, Toronto Medical Discovery Tower Plans
(available upon request)

Appendix F. Total Project Cost Estimate

(available upon request to limited distribution)

Appendix G. Room Data Sheets

(available upon request)

Appendix H. Letter of Intent

(available upon request to limited distribution)

Appendix I. UHN Fit Out / Tenant Improvement Description
(available upon request)

Appendix J. Links

U of T Standards and Policies
http://www.fs.utoronto.ca/aboutus/design.htm

Department of Nutritional Sciences
http://www.utoronto.ca/nutrisci/

Program in Child Nutrition and Health Promotion
http://boundless.utoronto.ca/initiatives/program-in-child-nutrition-and-health-promotion/

Faculty of Medicine
http://medicine.utoronto.ca/