

**Report to the Business Board  
Deferred Maintenance  
December 2006**



**R. Swail  
R. deSouza  
K. McLean**

## **Table of Contents**

Introduction Facilities Condition Assessment	3
Combined Academic and Administrative Buildings	3
St. George Campus	5
Scarborough Campus	6
Mississauga Campus	7
Solving the Problem of Deferred Maintenance – Funding	8
Solving the Problem of Deferred Maintenance – Priorities	9
Conclusion	9
Appendix A – All Buildings Facilities Condition Indices	

# Report on Deferred Maintenance – December 2006

## Introduction - Facilities Condition Assessment Program

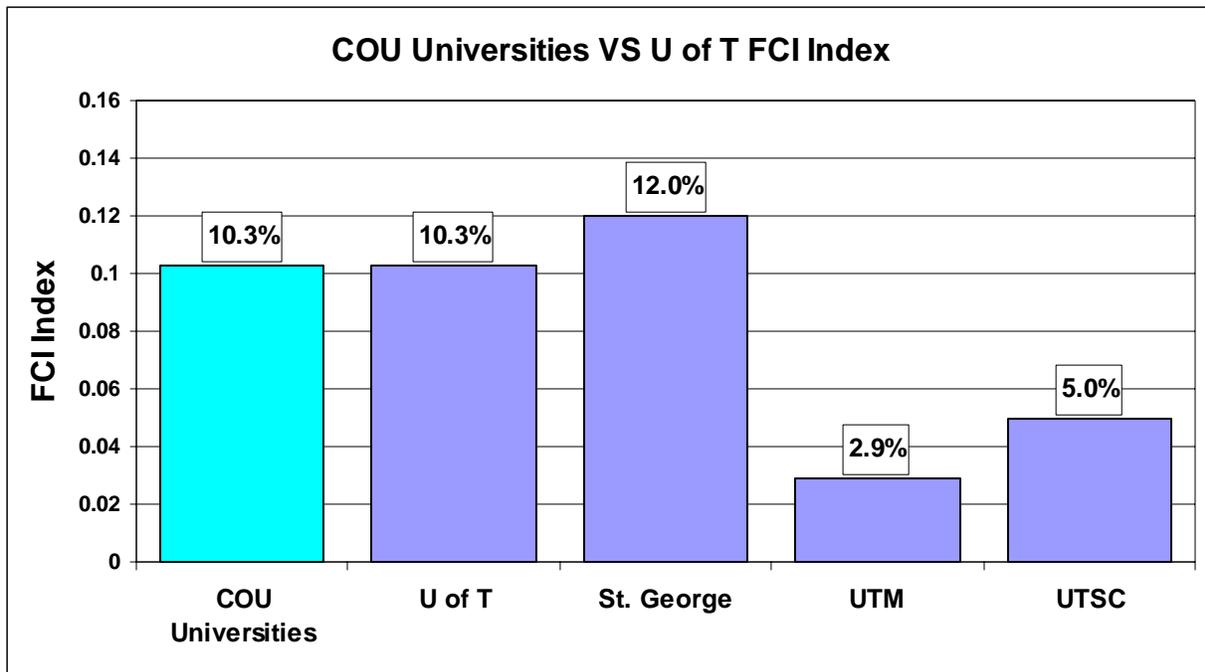
In 1999, the Council of Ontario Universities (COU) and the Ontario Association of Physical Plant Administrators (OAPPA) adopted a five-year program to assess university facilities using consistent software, cost models and common audit methodology. All Ontario Universities agreed to participate in this initiative.

The common software and assessment methodology, Vanderweill Facilities Assessment (VFA) program, provides a consistent way to determine, quantify, and prioritize deferred maintenance liabilities. All facilities are assigned a numeric score called a facility condition index or FCI. The index for each building is determined by dividing the amount of deferred maintenance by the current replacement cost of the building. The FCI indices can be used for benchmarking with other institutions.

Annually, Ontario Universities provide an updated report to the Ministry of Training, Colleges and Universities on their deferred maintenance inventory.

## Academic and Administrative Buildings - University of Toronto

The current combined estimated replacement value of all academic and administrative buildings at the University of Toronto is \$2.8B. The total deferred maintenance liability is currently estimated at \$289M, up only slightly from 2005. Our combined facility condition index (FCI) is 10.3%, which is slightly reduced from the previous year and consistent with the average for all Ontario universities. Our reduction in total FCI can be attributed to new buildings added to the portfolio with no deferred maintenance and projects completed utilizing deferred maintenance funding. Buildings with an FCI over 10.0% are considered in poor condition.

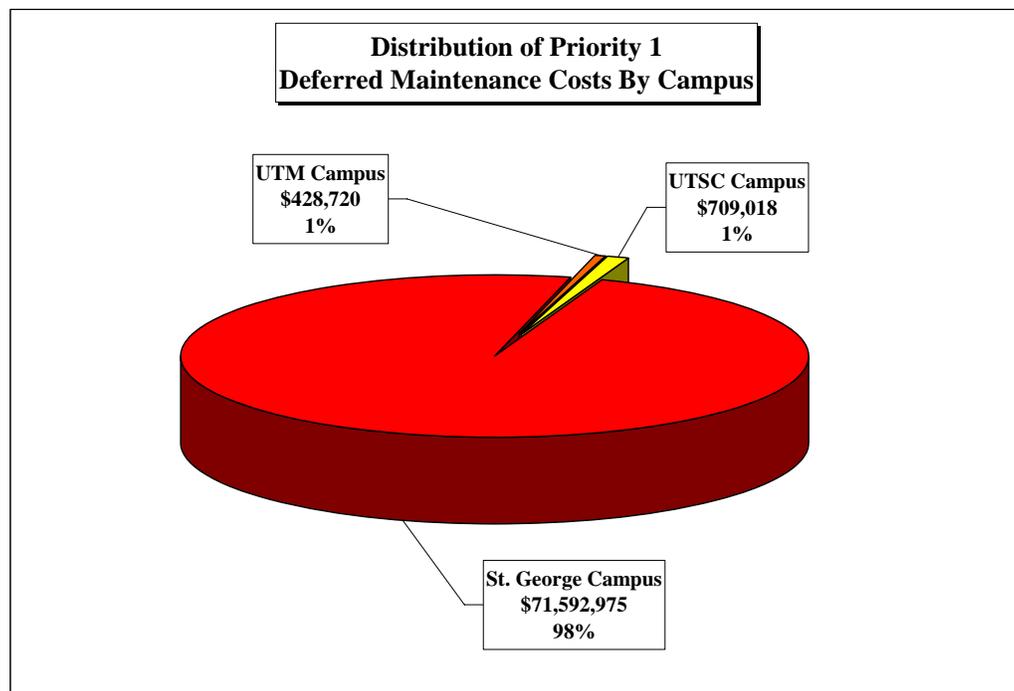


It is important to note that the total deferred maintenance figures noted in this report are conservative for a number of reasons:

1. The VFA database relates only to academic and administrative buildings. Deferred maintenance items related to other buildings on campus or the central utilities infrastructure are not included.
2. The VFA audits include a review of the existing building systems and not the systems that should be in the building. Capital renewal items, which address requirements to meet current fire codes, accessibility standards, or the cost to modernize the buildings to present day heating, ventilation or air conditioning standards, are not included. These upgrades are defined by the COU as “adaptive renewal” and are excluded from the database.
3. Some of the environmental liabilities such as mould and asbestos abatement are not included in the VFA database. The University is obliged to undertake a significant amount of rehabilitation work on an annual basis in this area, which is not part of our operating or deferred maintenance budget. The environmental liability is roughly estimated in the tens of millions of dollars.
4. The current VFA analysis does not include construction soft costs. These costs, which include consulting fees and permits costs, can add 15% to 30% to the overall cost of a project.

The VFA database classifies all deferred maintenance items into priorities ranging from 1 to 5. Priority 1 items should be corrected within the next year. Priority 2 items should be addressed in the next 1 to 3 years.

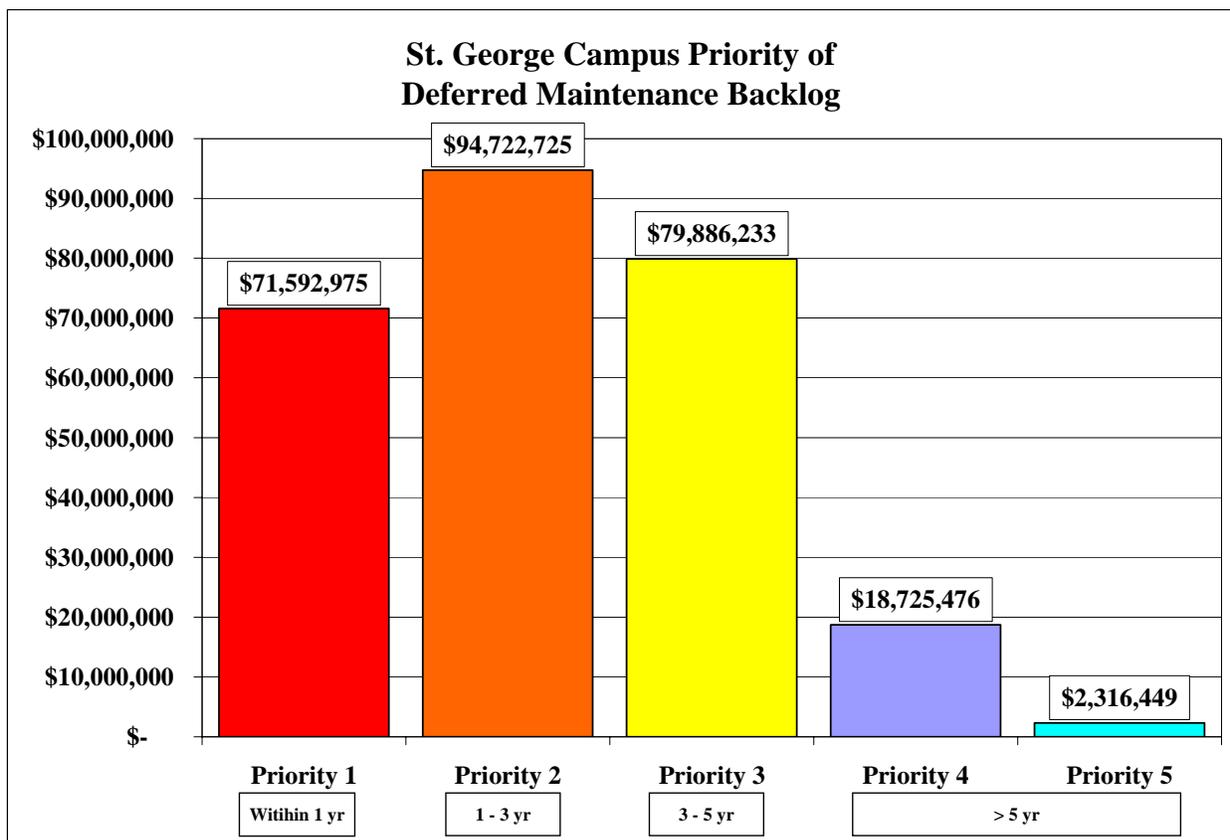
The graph below identifies the priority 1 items and indicates that the vast majority of critical repair items have been identified at the St. George campus.



## St. George Campus

There are 100 academic and administrative buildings at the St. George campus with a total gross area of 902,183 square meters and a total replacement value estimated at \$2.2B. The combined FCI is down from 12.6 in 2005 to 12.0 in 2006. The total estimated deferred maintenance backlog is \$267M, up only slightly from the previous report of \$264M. The change is attributable to deferred maintenance funding and the effect of new buildings opening in 2006 that have no deferred maintenance.

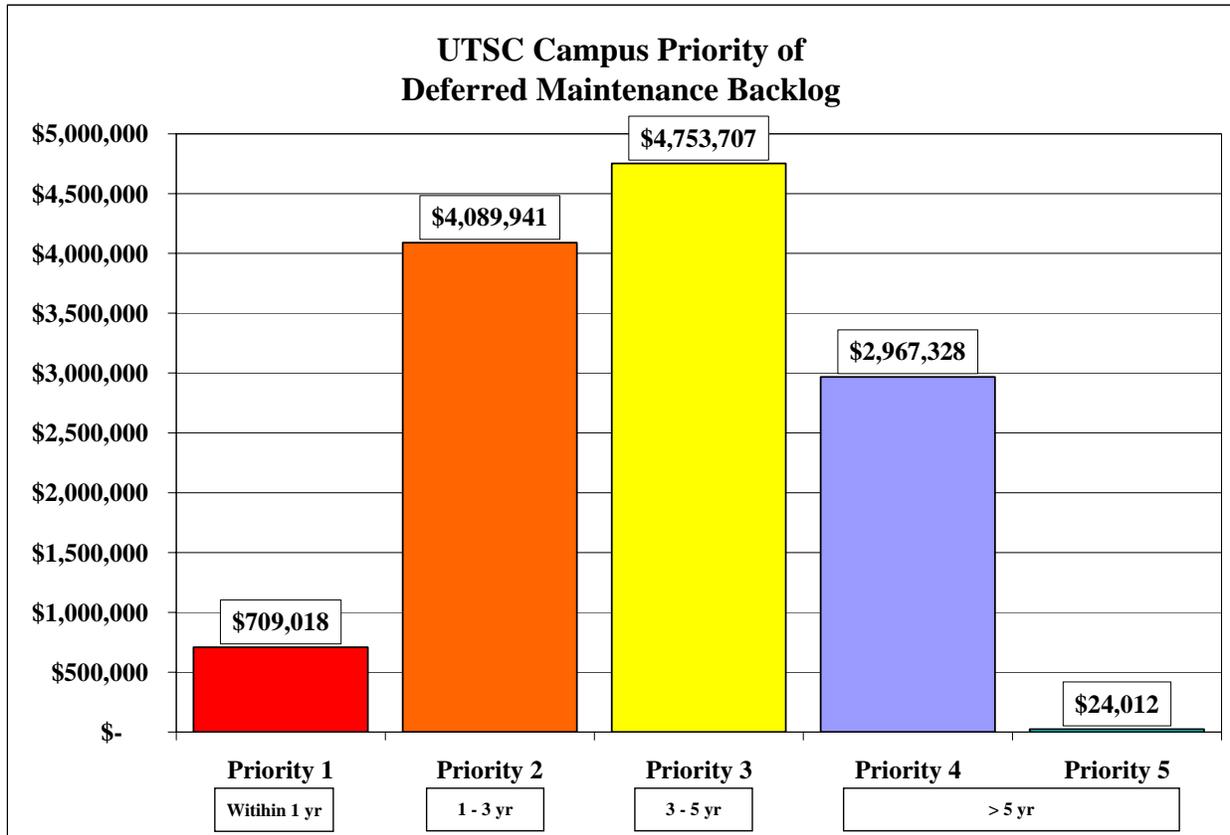
The total campus inventory by priority is illustrated in the graph below. In contrast to the other campuses, the vast majority of deferred maintenance items at St. George campus are within the higher priority ratings of 1-3.



## University of Toronto at Scarborough (UTSC)

There are 13 buildings in the database for the UTSC campus. The total gross area is 87,393 square metres. The total replacement value of these buildings is estimated at \$251M. The total deferred maintenance liability stands at \$12.5M, up from the previous report of \$11.3M, and the total FCI has risen from 4.7 in 2005 to 5.0 in 2006. A facility condition index of 5.0 or less is indicative of buildings in excellent condition.

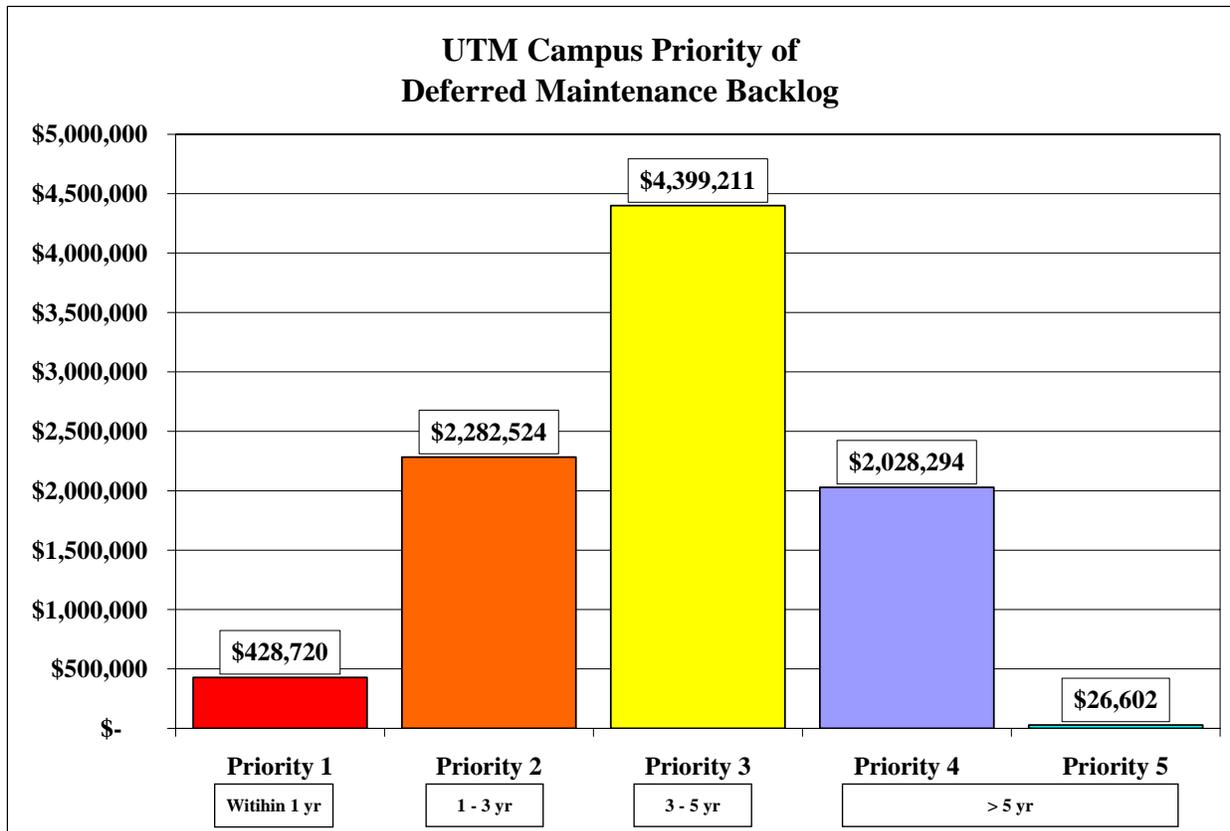
The majority of the deferred maintenance items at the Scarborough campus are priority 2 (within 1-3 years) and priority 3 (within 3-5 years).



## University of Toronto at Mississauga (UTM)

The survey data include 11 buildings with a gross area of 96,821 square metres. Total replacement value of the buildings was estimated at \$311M, with deferred maintenance of \$ 9.2M. The campus FCI is 2.9, which is considered excellent.

The majority of the deferred maintenance items at the Mississauga campus are priority 3 (within 3-5 years).



## **Central Utilities Infrastructure:**

### **Solving the Problem of Deferred Maintenance – Funding**

We receive two sources of funding for deferred maintenance. The Provincial Government's Facilities Renewal Program (FRP) and central funding from the University. Each year, \$42 million has been allocated to Ontario universities and colleges to assist with deferred maintenance. The allocation to each university is based on its share of space, although a minimum is set so that no one gets less than 0.5% of the total. U of T's share of this funding is \$4,896,546; however, over half of the funding provided through FRP to St. George is utilized to address environmental liabilities such as PCB transformer replacements and environmental hazards such as asbestos and mold abatement

The building assessment program has been successful in identifying the magnitude and need for funding both externally and internally. According to members of OAPPA, most Ontario universities are now providing some level of direct funding to alleviate this problem. Fortunately the University of Toronto increased the allocation for deferred maintenance in this fiscal year to \$9.7M up from the \$8M provided in the previous fiscal year. Internal funding from the University has insured that the deferred maintenance liability does not expand significantly.

In order to keep the FCI flat we will require consistent funding of approximately \$13.6M per year going forward. To begin to improve the backlog, reducing the FCI 1% over a 5 year period, we would require consistent funding for all three campuses of \$18.4M per year.

### **Solving the Problem of Deferred Maintenance – Setting Priorities**

Setting the priorities for deferred maintenance depends on four basic criteria:

1. Legislation, regulations, or enforcement agency orders requiring the work to be undertaken
2. Risk of failure based on VFA assessment priorities
3. Work that can be coordinated with major renovations to buildings
4. Projects that support academic priorities

### **Conclusion**

We are presently managing the issue of deferred maintenance; however this liability will be with us for a very long time into the future. With stable, significant funding over time we will be able to maintain the current condition of the buildings and minimize, although not eliminate, the chance of an unforeseen problem having major consequences on the University's mission and operating budget.

## Appendix A : UofT Facility Condition Index - November 2006 St. George Campus

BUILDING	BUILDING USE	GSM	REPLACEMENT VALUE	REQUIREMENTS	FCI	YEAR OF AUDIT
097 - Centre for Medieval Studies	Academic	799	1,328,314	872,789	65.7%	2005-2006
097A - Queens Park Crsc. E.-39(rear)	Administration	165	299,419	155,865	52.1%	2005-2006
142 - Spadina Ave-713	Administration	311	564,359	289,821	51.4%	2003-2004
046 - Varsity Newspaper	Administration	724	1,313,814	662,223	50.4%	2005-2006
104 - Economics Department	Academic	2,403	3,994,915	2,008,004	50.3%	2003-2004
071 - College Street-92	Administration	592	1,074,279	461,087	42.9%	2003-2004
061A - Borden Building North	Administration	3,425	5,693,960	2,240,595	39.4%	2003-2004
050 - Falconer Hall	Administration	2,453	4,451,361	1,648,490	37.0%	2003-2004
138 - Huron Street-370	Other	443	736,474	265,465	36.0%	2003-2004
125 - Spadina Avenue-703	Administration	705	1,279,335	453,399	35.4%	2005-2006
003 - Sigmund Samuel Library Building	Library	17,818	27,171,381	9,476,277	34.9%	2001
039 - St. George Street-49	Academic	787	1,308,364	455,898	34.8%	2002-2003
054 - Spadina Crescent-1	Administration	8,647	15,691,365	5,389,082	34.3%	2002-2003
068 - Clara Benson Building	Athletic Facility	9,988	14,317,398	4,470,991	31.2%	2001
061 - Borden Building South	Administration	2,443	4,061,414	1,266,116	31.2%	2003-2004
074 - Spadina Avenue-581	Administration	441	800,265	241,762	30.2%	2005-2006
136 - Spadina Avenue-705	Administration	325	589,765	178,151	30.2%	2003-2004
093 - Electrometallurgy Lab	Acad & Research	176	636,099	182,281	28.7%	2005-2006
053 - Institute of Child Study	Academic	2,489	4,137,888	1,184,828	28.6%	2003-2004
110 - St. George Street-121	Administration	1,244	2,257,437	643,947	28.5%	2003-2004
117 - W.B. MacMurray Field House	Athletic Facility	368	965,231	274,040	28.4%	2005-2006
033 - Sidney Smith Hall	Academic / Administration	28,039	50,881,252	14,222,606	28.0%	2001
146 - Sussex Avenue-40	Administration	375	680,498	180,321	26.5%	2003-2004
154 - Health Sciences Building	Academic	14,340	26,022,224	6,754,759	26.0%	2003-2004
091 - Studio Theatre	Academic	442	1,348,091	348,392	25.8%	2003-2004
006 - John P. Robarts Library Building	Library	80,882	123,340,197	31,680,791	25.7%	2001
115 - St. George Street-97	Administration	1,039	1,885,432	480,437	25.5%	2003-2004
027 - Physical Geography Building	Academic	1,952	3,245,141	824,134	25.4%	2003-2004
020 - Rosebrugh Building	Academic	5,628	9,356,381	2,345,521	25.1%	2002-2003
047 - Canadiana Gallery	Academic Residence /	2,864	4,367,428	1,068,100	24.5%	2003-2004
032 - Wetmore Hall - New College	Academic	12,919	14,876,874	3,622,296	24.3%	2005-2006
007 - Mining Building	Acad & Research	11,064	18,393,568	4,457,036	24.2%	2002-2003

088 - St. George Street-123	Academic / Administration	790	1,433,581	347,286	24.2%	2003-2004
010A - Convocation Hall	Academic	4,348	13,261,313	3,201,583	24.1%	2002-2003
084 - CIUT Radio	Other	686	1,799,316	432,192	24.0%	2002-2003
069 - Willcocks Street-47	Administration	458	831,114	193,389	23.3%	2005-2006
120 - Louis B. Stewart Observatory (SAC)	Other	537	892,746	204,307	22.9%	2005-2006
049 - Aerospace	Acad & Research	8,104	29,289,477	6,626,043	22.6%	2005-2006
090 - College Street-88	Academic	1,734	2,882,723	626,334	21.7%	2003-2004
082 - Gage Building	Acad & Research	1,353	3,548,797	769,492	21.7%	2003-2004
030A - Varsity Arena	Athletic Facility	6,560	9,403,498	1,996,477	21.2%	2003-2004
016 - Banting Institute	Acad & Research	9,466	34,212,017	7,001,363	20.5%	2002-2003
028 - Architecture Building	Academic	6,452	10,726,256	2,194,709	20.5%	2005-2006
043 - School of Graduate Studies	Academic	1,139	1,893,553	384,771	20.3%	2003-2004
021 - Engineering Annex	Acad & Research	1,941	7,015,162	1,377,099	19.6%	2002-2003
155 - 255/257 McCaul Street (BOE)	Academic / Administration	6,628	12,027,566	2,315,887	19.3%	2003-2004
010 - Simcoe Hall	Administration	5,893	10,693,791	2,037,887	19.1%	2002-2003
023 - University College Union	Other & Administration	2,090	3,792,639	696,822	18.4%	2002-2003
024 - Haultain Building	Administration	3,258	5,416,327	937,118	17.3%	2003-2004
034 - Massey College	Academic	7,456	19,556,417	3,329,031	17.0%	2005-2006
019 - Kings College Circle-21	Administration	2,331	4,229,972	715,376	16.9%	2002-2003
067 - Huron Street-215	Administration	11,572	20,999,246	3,535,049	16.8%	2003-2004
102 - Soldiers Tower	Other	300	786,873	119,137	15.1%	2005-2006
056 - Graduate Students Union	Administration	920	1,669,487	244,320	14.6%	2003-2004
077 - Sussex Court	Academic	3,293	5,474,514	796,266	14.5%	2005-2006
068A - Warren Stevens Building	Athletic Facility	19,568	28,049,945	3,772,771	13.5%	2001
018 - Central Steam Plant	Utilities	3,264	32,178,993	4,130,918	12.8%	2002-2003
052 - Best Institute	Acad & Research	6,884	24,880,153	3,146,419	12.6%	2002-2003
014 - Bloor Street West-371	Administration	16,568	30,065,287	3,771,864	12.5%	2003-2004
153 - Spadina Road-56	Academic	899	1,631,379	202,670	12.4%	2003-2004
036 - Nursing Building	Academic	3,131	11,316,060	1,388,818	12.3%	2002-2003
001 - University College	Academic / Administration	16,922	44,384,883	5,407,933	12.2%	2001
070 - Galbraith Building	Academic	19,577	32,546,175	3,846,992	11.8%	2001
051 - Edward Johnson Building	Academic	14,881	24,739,216	2,891,724	11.7%	2001
004 - McMurrich Building	Administration	5,400	9,799,164	1,074,760	11.0%	2002-2003
072 - Ramsay Wright Zoological Laborator	Acad & Research	22,997	83,115,757	8,485,795	10.2%	2001
089 - Admissions Office	Administration	1,802	3,270,017	333,170	10.2%	2003-2004
123 - Ont. Inst. for Studies in Educatio	Academic / Administration	38,156	69,240,167	7,044,110	10.2%	2002-2003

026 - Cumberland House	Administration	1,581	2,628,365	265,819	10.1%	2003-2004
005 - Medical Sciences Building	Acad & Research	72,372	261,566,882	26,100,374	10.0%	2001
078 - McLennan Physical Laboratories	Acad & Research	31,826	115,025,529	11,195,725	9.7%	2001
073 - Lash Miller Chemical Laboratories	Acad & Research	21,681	78,359,470	6,792,856	8.7%	2001
006B - Thomas Fisher Rare Book Library	Library	6,383	9,733,692	827,537	8.5%	2002-2003
022 - Mechanical Engineering Building	Acad & Research	9,723	35,140,867	2,969,151	8.4%	2001
032A - Wilson Hall - New College	Residence / Academic	18,360	21,142,458	1,760,461	8.3%	2005-2006
156 - Old Administration Building (BOE)	Academic / Administration	3,093	5,376,253	447,024	8.3%	2003-2004
065 - Dentistry Building	Acad & Research	23,898	86,372,152	7,045,366	8.2%	2001
011 - Tanz Neuroscience Building	Acad & Research	5,421	19,592,578	1,500,491	7.7%	2003-2004
006A - Claude T. Bissell Building	Academic	9,298	15,457,646	1,165,628	7.5%	2002-2003
040 - Flavelle House	Academic	11,512	19,138,355	1,439,948	7.5%	2003-2004
079 - F. Norman Hughes Pharmacy Building	Acad & Research	6,196	22,393,583	1,610,743	7.2%	2002-2003
111 - Bloor Street West-246	Academic	6,698	11,135,224	780,199	7.0%	2005-2006
008 - Wallberg Building	Acad & Research	17,160	62,019,672	4,034,672	6.5%	2001
037 - David Dunlap Observatory	Acad & Research	2,132	7,705,474	492,585	6.4%	2005-2006
025 - FitzGerald Building	Acad & Research	9,392	33,944,566	2,098,668	6.2%	2001
057 - Bancroft Building	Administration	3,728	6,197,688	325,333	5.2%	2003-2004
062 - Earth Sciences Centre	Acad & Research	30,345	109,672,899	5,118,191	4.7%	2001
008A - D.L. Pratt Building	Acad & Research	8,130	29,383,446	1,245,417	4.2%	2001
143 - Koffler Student Services Centre	Administration	11,511	30,192,317	1,271,912	4.2%	2003-2004
145 - Koffler Institute for Pharmacy Mgm	Academic Academic / Administration	2,118	3,521,111	147,591	4.2%	2005-2006
083 - McCaul Street-254/256	Administration	4,391	7,299,906	298,058	4.1%	2003-2004
009 - Sanford Fleming Building	Acad & Research	21,833	78,908,829	2,877,401	3.6%	2001
038 - Woodsworth College	Academic	5,332	13,985,356	297,478	2.1%	2005-2006
105 - Fields Inst for Research in Math S	Academic	3,239	5,384,740	112,641	2.1%	2005-2006
132 - Innis College	Academic	3,361	5,587,562	116,688	2.1%	2003-2004
134 - Joseph L. Rotman School of Managem	Academic	9,987	16,603,088	268,183	1.6%	2005-2006
103 - School of Continuing Studies	Academic	1,706	2,836,174	8,770	0.3%	2005-2006
080 - Bahen Information Technology Centr	Acad & Research	29,000	104,811,800	243,565	0.2%	2005-2006
00x - CCBR	Acad & Research	20,628	37,432,806	Construct Complete	0.0%	2006-2007
00x - Leslie Dan Pharmacy	Acad & Research	16,500	29,941,890	Construct Complete	0.0%	2006-2007
	<b>St. George November 2006</b>	<b>902,183</b>	<b>2,232,615,889</b>	<b>267,243,858</b>	<b>12.0%</b>	
	St. George December 2005	-	2,089,395,371	264,131,162	12.6%	
	St. George January 2005	-	1,980,206,646	247,488,670	12.5%	

## UTM (Mississauga)

	BUILDING USE	GSM	REPLACEMENT VALUE	REQUIREMENTS	FCI	YEAR OF AUDIT
322 - Geomorphology Building	Acad & Research	60	216,852	69,976	32.3%	YEAR OF AUDIT
330 - Springbank Centre	Administration	543	985,360	264,295	26.8%	YEAR OF AUDIT
317 - Rock Magnetism Laboratory	Acad & Research	209	755,368	48,479	6.4%	YEAR OF AUDIT
316 - Drama Workshop	Academic	418	1,274,892	62,930	4.9%	YEAR OF AUDIT
311 - North Building	Acad & Research	9,459	34,186,718	1,665,494	4.9%	2005-2006
313 - South Building	Academic / Administration	52,478	189,665,988	6,982,428	3.7%	2005-2006
328 - Student Centre	Administration	2,991	7,845,124	35,356	0.5%	2005-2006
314 - Kaneff Ctr for Mgmt & Social Science	Acad & Research	3,376	12,201,539	36,393	0.3%	2005-2006
329 - CCIT	Academic	11,414	41,252,479	-	0.0%	2005-2006
331 - Academic Learning Centre	Library	9,173	13,398,634	Construct Complete	0.0%	YEAR OF AUDIT
332 - Recreation, Athletics and Wellness Centre	Athletic Facility	6,700	9,199,368	Construct Complete	0.0%	YEAR OF AUDIT
	<b>UTM November 2006</b>	<b>96,821</b>	<b>310,982,321</b>	<b>9,165,351</b>	<b>2.9%</b>	
	UTM January 2005	-	311,268,924	11,387,392	3.7%	

## UTSC (Scarborough)

	BUILDING USE	GSM	REPLACEMENT VALUE	REQUIREMENTS	FCI	YEAR OF AUDIT
200R - R-Wing	Athletic Facility	8,050	11,539,353	1,857,043	16.1%	2005-2006
200PAV - Pavilion	Academic	560	930,983	146,509	15.7%	2005-2006
200H - H-Wing	Academic / Administration	9,216	33,308,467	2,493,891	7.5%	2005-2006
200S - S-Wing	Academic / Administration	29,771	107,598,348	6,052,826	5.6%	2005-2006
200CP - Central Plant	Utilities	1,486	14,650,117	778,813	5.3%	2005-2006
200DC - Daycare Centre	Other	495	570,017	26,381	4.6%	2005-2006
200POR - Portables	Other	783	1,301,714	53,975	4.1%	2005-2006
200B - Bladen Wing	Academic / Administration	9,253	33,442,193	1,096,010	3.3%	2005-2006
200SEL - Soil Erosion Laboratory	Research	323	1,167,387	26,762	2.3%	2005-2006
200ARC - Academic Resource Centre	Library	8,737	13,323,401	6,577	0.0%	2005-2006
200M - Management Building	Academic / Administration	5,069	8,427,060	2,610	0.0%	2005-2006
200ART - Arts and Administration Building	Academic / Administration	8,737	15,854,684	2,610	0.0%	2005-2006
200SC - Student Centre	Multi-Use	4,913	8,915,425	-	0.0%	2005-2006
	<b>UTSC November 2006</b>	<b>87,393</b>	<b>251,029,150</b>	<b>12,544,006</b>	<b>5.0%</b>	
	UTSC January 2005	87,393	240,449,223	11,318,594	4.7%	

TOTAL U of T

1,086,397

2,794,627,360

288,953,214

10.3%

