

University of Guelph

Capital Plan

For 2017/18

November, 2016

University of Guelph

2017 2018 Capital Plan



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Purpose

With the increasing complexity of capital planning and the inherent risks given limited financing capacity, the coordination of the planning and prioritization of capital projects is critical. The ability to leverage both internal University resources and external funding for the projects with the highest priority requires a continuous and transparent process. The focus of this report is to summarize, for the Board of Governors, all of the considerable planning efforts that occur each year into a single report with two primary objectives;

- To confirm major capital project plans for the next fiscal year
- To identify major capital financing and funding requirements for the next fiscal year

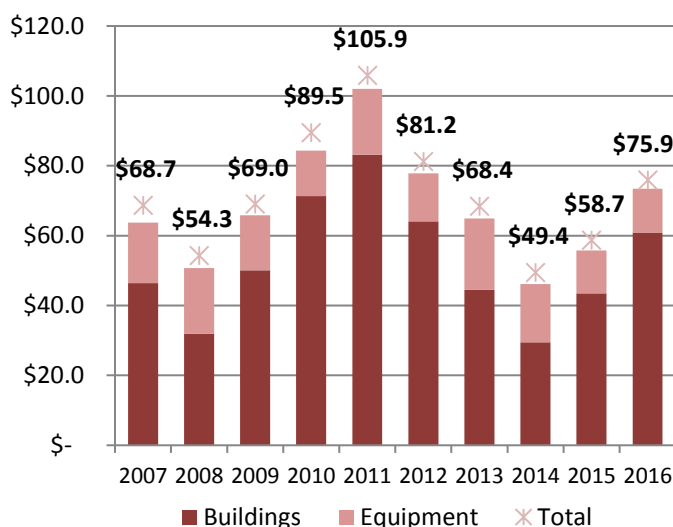
Given the uncertainty that exists with government funding programs, donor opportunities and economic conditions, plans are open to change. Any changes related to this plan will be presented to the Board for information and if necessary approval.

The University of Guelph is responsible not only for the effective use of operating funds but also for maintaining the physical assets and infrastructure that enable the delivery of programs and services. With an investment estimated at \$2.2 billion in buildings and their contents as well as demands for updated and expanded space, capital investments have been a major cost with \$720 million in accumulated purchases over the past 10 years.

Capital planning for major projects has been an on-going effort across the University for many years. Efforts have focused on two major objectives; maintaining what we have and enabling new and improved programs and services. While typically government funding for these types or expenditures is cyclical with long periods of little support, it is occasionally interrupted with major tranches usually targeted to “stimulate” economic conditions. In the “leaner” periods, the University has usually underwritten critical capital renewal programs or high priority building projects with financing in the form of external debt or temporary use of short-term working capital. Decisions regarding debt are guided by the University’s [Capital Debt Policy](#) introduced in 2014.

In 2016, the University has received a major one-time funding commitment for 6 projects under the SIF (Strategic Infrastructure Program) sponsored by the federal government. For the purposes of this report projects reflect this funding as well as the on-going commitment to maintaining major building and utilities infrastructure. The following presents an update of 2016 2017 projects, review of the current SIF program and proposed 2017 2018 new projects. It should be noted that given the impact that the SIF program will have on campus operations, 2017 2018 proposals have been limited to the highest priority capital maintenance projects.

**Annual Major Capital Purchases
Total of \$720 M over 10 Years**



Purpose

Capital Plan Components

For presentation, Capital Plans are not only organized by year, but within each year expenses are organized in major groupings. Normally there are two such groupings; Capital Renewal and Major Building Projects. However this report also includes the SIF program, which due to its scale and specific funding and operational requirements, has been highlighted.

1. Capital Renewal

Capital renewal refers to spending required to maintain existing Guelph campus buildings and related infrastructure. With 145 buildings with 6.6 million square feet of space, maintaining capacity and quality of space is an on-going commitment. Adding to the challenge of maintaining such a large number of buildings is their average age, which at 48 years is one of the oldest in the Ontario university system. Investments in buildings and the related infrastructure are supported from a number of sources, the primary ones being revenues and fees generated from operations, government grants and University debt. Projects in this category typically include building “envelope” replacements (e.g., roofs and windows), repair and upgrade of major utilities delivery systems including, electrical and heating infrastructure as well as service related equipment and “leasehold” improvements in residence and other student service facilities.

The amount of cost committed to this category funding reflects a balance of prioritization and funding. Normally projects in this category do not exceed \$2 million and costs in the category are approved by the Board of Governors as an overall annual amount with related funding sources.

2. Major Building Projects

In addition to annual capital maintenance, the University will undertake major building programs that typically are expanding program space or are the major repurposing of existing space. Usually these are large specific projects with expenditures in excess of \$2 million. Recent examples have been the construction of new space for the expansion of the School of Engineering (\$50 million) and the construction of a new addition to the Mitchell Athletic Centre (\$45 million).

3. SIF (Strategic Infrastructure Fund) 2016 -2018

As part of the 2016 federal budget the Strategic Infrastructure Fund or SIF funding was created as a major fiscal stimulus program with funding (\$2 billion) targeted for colleges and universities across Canada. Terms of the program provide for funding up to 50% of “eligible” projects and expenses. Federal priorities for spending were for two key areas; improving the “environmental sustainability” of programs in areas of research and innovation; and increasing the scale and quality of facilities in research and innovation including commercialization space. Eligible costs are directed to buildings and related utilities with equipment and furnishings being ineligible costs. Most critical is that projects that were submitted on May 9, 2016 **must be “substantially” complete by April 30, 2018.**

The University submitted 6 major projects for consideration for funding and was successful in receiving most of the funding requested for all 6 projects. Overall this program has \$66 million in total spending, \$30 million of which will be funded through federal and provincial capital grants. The program is administered through the province of Ontario, which directed that two years (2016 2017 and 2017 2018) of annual “Facilities Renewal Funding” be transferred to this program. While this enhances SIF specific projects, it redirects funding from campus wide infrastructure that had been built into our longer terms capital renewal program.

Purpose

Updating 2016 2017 Plans

In the 2016 2017 Capital Plan a number of projects were proposed under the understanding that costings and more detailed planning had to be completed. The table below presents the revised plan for 2016 2017 projects. Major changes occurred mainly in the Major Building Project category where \$5.9 million in additional costs have been identified.

Two of the projects, OVC Phase 1&2 and the Powell Building Renovation Project have received previous Board approvals covering their cost increases. Three projects, the Library Storage and Space, Mitchell Building "link" and the Football Pavilion will require revised approvals totaling \$2.2 million (of which \$1.5 million is funded from donations and \$0.7 million will be allocated from general University reserves).

There were smaller changes in the Capital Renewal category where additional funding from Athletics will be used for new equipment and a scoreboard in the new Mitchell Centre addition. Parking Services saw a reduction of \$1 million from a project which will be deferred into fiscal 2017 2018. Financing requirements increased by a modest net \$0.5 million due to the transfer of 2016 2017 provincial funding for deferred maintenance of \$1.5 million to the SIF program in accordance with provincial directives, offset by the \$1.0 million reduction in Parking Services projects.

\$millions

2016/17 Capital Budget (Forecast Update)

	COSTS		FUNDING							Total Funding
	Revised Forecast Cost	Approval	Fund Raising	Grants	Fees	Central Reserves	Unit Reserves	Heritage	Financing	
A. Capital Renewal										
A.1 Capital Renewal (DM)	10.0	-	-	-	0.1	-	-	-	9.9	10.0
A.2 Athletics	3.8		0.4	-	-	-	3.4	-	-	3.8
A.3 Ancillary - Housing	6.7	-	-	-	-	-	6.7	-	-	6.7
A.4 Ancillary- Parking	5.5	-	-	-	-	-	1.0	-	4.5	5.5
SUB TOTAL - Capital Renewal	26.0		0.4	-	0.1	-	11.1	-	14.4	26.0
B. Major Building Projects										
B.1 OVC Phase 1 & 2	35.2	Jun-16	8.6	23.0	-	0.8	0.8	2.0	-	35.2
B.2 Turf Grass Institute	15.0	Jan-16	-	15.0	-	-	-	-	-	15.0
B.3 Powell Building Renovations	11.5	Oct-16	-	-	-	11.5	-	-	-	11.5
B.4 Library (storage and space)	5.3	Required	-	-	-	-	-	5.3	-	5.3
B.5 University Centre	3.0	Oct-16	-	-	-	-	-	3.0	-	3.0
B.6 Mitchell Building "Link"	2.9	Required	1.0	-	-	1.9	-	-	-	2.9
B.7 Football Pavilion	9.7	Required	9.7	-	-	-	-	-	-	9.7
SUB TOTAL - Major Building Project	82.6		19.3	38.0	-	14.2	0.8	10.3	-	82.6
TOTAL	108.6		19.7	38.0	0.1	14.2	11.9	10.3	14.4	108.6

Purpose

SIF Program

While there are no changes at this time related to the SIF projects initially approved by the Board, a summary is shown below that restates the current University commitment for this major program. While about 30% of the costs in the SIF program will reduce deferred maintenance in specific buildings, much of the project costs will be for improvements in space usage through space redesign and the modernization of facilities including upgrading existing and creating new research laboratories.

In terms of funding the program, with ineligible costs and a requirement for cost sharing, the University will be financing \$35.7 million upon completion of the program. At this time it is proposed to temporarily use internal working capital (liquidity) as this internal financing source. This is based upon the current position the University is in with respect to funds which are not immediately required for spending, invested in short term funds yielding less than 2%. Using these funds for this purpose will avoid more expensive external debt. Funds will be replenished over time under an amortization schedule that will charge the Operating Budget over a period not to exceed 15 years.

\$millions

			Total Budget Cost			Funding Source				
FEDERAL SIF FINANCING PLAN (Approved)			Initial Total Cost	Ineligible	Eligible	Financing	Provincial Grants	SIF Grants	Total Grants	Total Funding
PROVINCIAL PRIORITY #1										
1	University of Guelph Food Innovation Centre		5.0	-	5.0	1.6	1.3	2.2	3.4	5.0
2	Renewal and Renovation of the McNaughton Building		13.8	-	13.8	4.4	3.4	6.0	9.4	13.8
	TOTAL		18.8		18.8	6.0	4.7	8.1	12.8	18.8
PROVINCIAL PRIORITY #2										
3	Research and Collaborative Space for Computer Science and Engineering		9.1	1.0	8.1	5.6		3.5	3.5	9.1
4	Research Collaboratory: McLaughlin Library		16.1	-	16.1	9.1		7.0	7.0	16.1
5	Library Renewal and Renovation									
5	Bioproducts Discovery and Development Centre: Bio-carbon Research Centre		7.1	3.1	4.0	5.3		1.8	1.8	7.1
6	University of Guelph Production Animal Research Isolation Unit		15.6	2.2	13.4	9.8	-	5.8	5.8	15.6
	TOTAL		47.9	6.3	41.6	29.8	-	18.1	18.1	47.9
	TOTAL ALL		66.6	6.3	60.3	35.7	4.7	26.2	30.9	66.6

Purpose

2017 2018 Projects

As the implementation of 2016 2017 approved projects continues, there are additional high priority capital renewal requirements that are submitted for Board approval constituting the 2017 2018 Capital Plan. As noted earlier there are no major building projects proposed and spending will be entirely related to facilities renewal across a number of programs.

Of note is the addition of a program to replace/enhance the University’s WIFI services across the main campus, including classrooms and student study space. This is a \$3.5 million program to be spread over the next two years. Funding for the program is proposed to be drawn from Heritage Funds already earned and available from the 20015 2016 fiscal year. The table below summarizes the Capital Renewal costs and funding sources proposed for 2017 2018.

Again with respect to the financing requirement of \$13.7 million, at this time it is proposed to use internal liquidity with the “amortization” of repayments built into the appropriate budgets i.e., Parking Services will repay \$5.7 million and the Operating Fund will repay the \$8.0 million required for main campus deferred maintenance projects.

\$millions

2017 2018 Capital Budget - Initial

	Total Budget Cost		Funding Source							Total Funding
	Budget Cost	Approval	Fund Raising	Grants	Fees	Central Reserves	Unit Reserves	Heritage	Financing	
Current Projects (Proposed for 2016/17)										
A. Capital Renewal (DM)										
A.1 Capital Renewal (DM)	8.0		-	-	-	-	-	-	8.0	8.0
A.2 Athletics	0.5		-	-	-	-	0.5	-	-	0.5
A.3 Ancillary - Housing	8.4		-	-	-	-	8.4	-	-	8.4
A.4 Ancillary- Parking	5.7		-	-	-	-	-	-	5.7	5.7
A.5 Main Campus - WIFI	3.5		-	-	-	-	-	3.5	-	3.5
TOTAL - Capital Renewal	26.1	Required	-	-	-	-	8.9	3.5	13.7	26.1

Summary

Summary 2016 -2018 Projects

Given the extraordinary impact of SIF and the size of the 2016 2017 capital program, the following table has been prepared to summarize the major cost, funding and financing requirements of both projected already approved and those proposed.

Of the total spending of \$201.3 million, it is proposed that 32% or \$63.8 million will be financed internally. The impact of “internally” financing the projects will be to temporarily reduce University working capital. While this commitment is a significant portion of current liquidity balances (\$230 million), projections are for relatively stable balances for several years. With the cost of borrowing being significantly higher than short-term opportunity income, the temporary use of these funds for financing capital projects is considered more cost effective. Funds will be replenished from the appropriate budgets over terms not to exceed 15 years.

\$millions	COSTS			FUNDING					
	Current Plan Costs	Initial Plan	Increase/ (Decrease)	Fund Raising& Fees	Grants - Provincial and Federal	Reserves	Heritage	Financing	Total Funding
Major Capital Summary 2016 - 2018 Projects									
A. Fiscal 2016 2017 - Updated									
A.1 Capital Renewal	26.0	24.9	1.1	0.5	-	11.1	-	14.4	26.0
A.2 Major Building Projects	82.6	76.7	5.9	19.3	38.0	15.0	10.3	-	82.6
TOTAL 2016/17 (exluding SIF)	108.6	101.6	7.0	19.7	38.0	26.1	10.3	14.4	108.6
B. Fiscal 2017 2018 - Initial Plan									
B.1 Capital Renewal	26.1	na		-	-	8.9	3.5	13.7	26.1
C. SIF Projects 2016 - 2018									
C.1 Provincial Priority	18.8	na		-	12.8			6.0	18.8
C.2 Other University Priority	47.9	na		-	18.1			29.8	47.9
TOTAL SIF 2016 to 2018	66.6	-	-	-	30.9	-	-	35.7	66.6
D. Combined 2016 -2018	201.3			19.7	68.9	35.0	13.8	63.8	201.3

The following section provides more detail on the proposals for 2017 2018 Capital Renewal Projects by major funding category.

Details

A.1 Capital Renewal Program – Main Campus Infrastructure

The University of Guelph is one of the oldest institutions in Ontario with an average building age of 48 years. Many building systems exceed the lifetime assigned to those systems. The capital renewal program has enabled us to continue to provide safe, reliable infrastructure to serve the university. Having said that, it's important to note that our deferred maintenance for the entire Guelph campus, including Student Housing, Infrastructure and Ancillaries is \$385 million. Physical Resources has a multi-year (5 year rolling) capital planning process to identify major capital renewal investments necessary to reduce the likelihood of a major building or utility breakdown. Extensive building and facilities condition audits are carried out which determine capital priorities, project schedules and the capital investments required. Through the annual planning process we identify strategic investments based on available resources.

The objective of preparing the 5 year rolling capital renewal plan is to identify the relative priority and costs of addressing campus facility needs. The plan enables the University to assess and prioritize the ongoing capital investment required to address critical capital renewal and reduce the likelihood of a major building or utility breakdown which would negatively impact the operations of the University. Updating energy efficiency and planning infrastructure for the future of the campus is also addressed through this process. In 2017/2018 a total of \$8 million is planned for spending under this category.

Highlights of Deferred Maintenance Projects for 2017-18 totaling \$8 million;

- On-going roof maintenance and repairs.
- Massey Hall – Wall and Window Rehab: Phase 3.
- Upgrade electrical distribution infrastructure to avoid failure and enhance electrical safety.
- Crop Science – replace perimeter heating system: Phase 3
- Continuation of Electronic Building Access: Phase 3b.
- Alumni House – exterior wall rehabilitation: Phase 2
- MacKinnon Building – main entrance floor slab repairs and hot water heating pump replacements.
- Annual requirements include: hazardous material abatement, fire code compliance, barrier free accessibility, interior repairs/life safety signs, sprinkler inspections, safety relief valve program, piping re-insulation, arc flash study, electrical substation maintenance, and annual electrical shutdown.

A number of deferred maintenance issues will also be addressed in 2017-18 in the Federal Strategic Infrastructure Fund projects, most notably at MacNaughton Building, Reynolds Building and McLaughlin Library.

The capital planning process is an iterative, collaborative and consultative process that draws upon the data collected during the condition assessment audits and upon the expertise of our internal staff and external consultants. The foundation of the process is based on the assessment of risk to the University. Physical Resources maintains a Facilities Condition database that outlines all deficiencies that need to be addressed on campus, and assigns priorities to them based on a risk assessment process. Building condition assessments are completed on a rolling 5 year schedule, and infrastructure condition assessments are completed once every 5 years. Using the University's Enterprise Risk Management (ERM) methodology, all

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identified requirements are rated by the likelihood/frequency of failure or loss and the impact/severity of the failure or loss as indicated in the table below:

Likelihood/Frequency of loss or failure	Almost certain (Very Likely)	Extremely likely to occur (at least once per year); failure/dealing with the situation a daily consideration	
	Likely	Likely to occur; has occurred previously and could reasonably occur again; failure/dealing with the situation a monthly consideration	
	Periodic (Somewhat Likely)	Periodically has occurred in the past; failure/dealing with the situation a consideration in one to 2 years	
	Unlikely	Has happened in the past; failure/dealing with the situation a consideration in 3 to 5 years	
	Rare (Very Unlikely)	Extremely rare/has not occurred in the past; requires attention in 5 to 10 years	
Impact/Severity of loss or failure	Catastrophic (Critical)	Imminent/certain life safety risk; entire campus/large area may require shutdown; a critical failure with a long recovery period; legislated/code requirement with major legal/fine/penalty implications; failure would have severe/catastrophic financial consequences (call into question the viability of the institution)	
	Major (Serious)	Potentially major safety risk; legislated/code violation; major failure requiring a building or system shutdown with a long recovery period; failure would have major financial consequences (create financial hardship for the institution)	
	Moderate	A significant failure requiring actions beyond routine activity; failure requires closing of floor or section of a building; failure would have moderate financial consequences (budget restrictions, reallocations, increased borrowing)	
	Minor	A failure which can be managed under routine activity; failure requires closing of a small area such as one or two rooms; failure would have minor financial consequences (handled within existing budgets by re-prioritization)	
	Insignificant (Negligible)	A failure not requiring shutdown/closure; minor occupant discomfort; poor appearance; failure would have insignificant or no financial consequences	

The resulting score (likelihood/frequency *times* impact/severity) is the basis for the prioritization of all requirements and establishes the 5 Year Capital Renewal Plan. (Refer to adjacent Table)

Table of Ranking (Likelihood times Impact)	
Very High Risk	= 16 or over
High Risk	= 12 to 15
Moderate Risk	= 6 to 10
Low Risk	= Less than 6

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The deficiencies are updated in the database accordingly. Over the next 5 years, an estimated investment of \$79M (ranked using the ERM methodology as very high and high risk priorities) will be required to upgrade and maintain the basic systems and infrastructure of our physical plant including; mechanical and electrical systems, building envelope structures (roofing, windows and wall caulking), elevator modernization, infrastructure (electrical service upgrades and service tunnel repairs), health and safety and code requirements. Estimates by year are provided in the table below.

CAPITAL RENEWAL PLAN (\$ millions)	Year 1	Year 2	Year 3	Year 4	Year 5	Total Plan
Category	2017-18	2018-19	2019-20	2020-21	2021-22	
Unforeseen Requirements	1.00	1.25	1.25	1.30	1.35	6.15
Academic & Administrative Buildings	5.50	6.70	15.90	14.50	12.50	55.10
Campus Infrastructure	1.45	1.70	0.30	4.60	10.10	18.15
Energy Conservation Projects	0.10	0.10				0.20
Total Capital Renewal Plan Spending	8.05	9.75	17.45	20.40	23.95	79.60
Funding						
Facilities Renewal Program - estimate		1.70	1.70	1.70	1.70	6.80
Student Energy Program (SERF) - estimate	0.05	0.05				0.10
Total Funding	0.05	1.75	1.70	1.70	1.70	6.90
Net Capital Renewal Plan Financing Required	8.00	8.00	15.75	18.70	22.25	72.70

A.2 Capital Renewal Program – Athletics

In January 2008 the Board of Governors approved the Athletics Master Plan, which established a long-range (30 year) building strategy for Athletics. The Plan is the framework for implementing future changes to facilities and playing fields and identified priorities for new projects and deferred maintenance items. Since this report, the following major projects have been completed or are underway:

- **Multiplex Project (Synthetic Fields)** completed fall 2011: This project included two full-size lit synthetic turf fields, one smaller synthetic field, one full-size natural turf field and laying the foundation for the building. This project was funded entirely through student fees. In addition to this project, a synthetic Field Hockey pitch was created on the north-east corner of campus, using operating dollars from Athletics.
- **Fieldhouse** completed spring 2012: The 91m x 53m Fieldhouse includes a 4-lane 200 metre synthetic track, and an interior field surface that can be divided into 3 fields for intramural play. The facility was built to replace the Dome, which had to be removed due to code issues. This project was funded through a combination of Athletics' operating dollars and central resources.
- **Alumni Stadium** completed fall 2012: The stadium renovations included an eight lane track, a synthetic field, new lights and new scoreboard. This project was funded through a combination of donors and central support. Focus is now on finding external funding that will support a throws area. The addition of a professional throws area will enable the University to bid on larger meets, which will help to offset the ongoing costs of the stadium.
- **Mitchell Centre Renovations:** Construction is nearing completion for Phase 1 of the extension to the Mitchell Building. The construction contract was awarded to Aquicon Construction and the project began mid-November 2014. The Fitness Centre opened at the start of September 2016, in time for the Fall 2016 semester. The Event Centre and remainder of the new building will be open

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by spring 2017. The expansion includes enhanced cardio and weight room space as well as space for recreational use and classes. The plan also includes gymnasium space, locker rooms, meeting rooms and extensive student lounge space. The new primary gymnasium would be designed to support large events such as convocation, plenaries and concerts. Such a space will provide opportunities for revenue generation both through hosting athletic competitions but also conferences. All but \$5 million of this project will be financed through a student capital fee, which is \$46.73 per semester in 2016/17, until 2038/2039, with a 3% annual increase.

- **Stadium Enhancement:** Construction of the Pavilion and Stadium improvements will be complete in the spring of 2017. The new addition will include the Home Team Change room, large group space for game reviews and programming, as well as a space for VIP events and viewing. The full cost of this project is estimated at \$9.7 million and will be covered in its entirety by the donor.
- **Mitchell Centre Phase 2:** this project involves renovations to the existing Mitchell building as well as the new entrance and the connection between the existing and new building. Construction is expected to be completed by the end of 2016.

Future Activities: Construction of a change room facility located at the Soccer Complex on the East side of campus is dependent on future government infrastructure grant funding. Construction of a throws area would allow Guelph to host larger track and field events, and is dependent on external contributions and fundraising. For 2017 2018 projects will be limited to a number of smaller projects across most facilities with a total estimated cost of \$0.5 million.

A.3 Capital Renewal Program – Ancillary - Student Housing

The University of Guelph is a residence intensive university, guaranteeing housing for all first year undergraduate students. Student Housing Services (SHS) manages all residence operations, which consist of nine primarily undergraduate buildings and two family and graduate developments. The age of the undergraduate housing inventory corresponds with three major growth periods for the University: the early decades of the 1900's (Mills, Johnston, Watson, and Maids), incorporation years from 1965 to 1972 (Lambton, Lennox Addington, East, South Residence Complex), and double cohort preparation in 2001 (East Village Townhouses). The family and graduate developments were built in 1972 (Wellington Woods) and 1993 (78 College Avenue).

SHS capital planning and expenditures have been guided by a strategic planning document outlining how SHS would address the issues of aging infrastructure, deferred maintenance, and aesthetic renewal of our residence buildings. This ambitious and aggressive plan was originally tabled before the Physical Resources and Property Committee (PRPC) in the spring of 2007 and is based on an external audit of the residence inventory conducted in 2003 and supplemented by additional reports and investigations in subsequent years. The resulting five year plans have identified priorities and have been designed to address two primary objectives: deferred and anticipated maintenance and the need for modernization or aesthetic renewal of the living areas occupied by students.

The SHS strategy of addressing high priority infrastructure and deferred maintenance, while at the same time making aesthetic improvements, has ensured that our residence inventory did not put the University at a competitive disadvantage with other Ontario universities that have newer housing inventory and positioned it for increased off-campus competition. Over the past ten years (2006/07 to 2015/16) SHS has invested in capital expenditures of \$81.0 million, of which \$54.0 million (67%) was focused on interior

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improvements and room reconfigurations to address aesthetic renewal and to respond to the evolving and dynamic needs of students. Our aggressive actions have enabled us to remediate critical deferred maintenance and to plan for future life cycle challenges within our buildings and infrastructure.

The current five year plan spans the period of 2016/17 - 2020/21 with anticipated capital expenditures of \$40.0 million over this period. SHS will continue to fund capital investment through the use of student fees and operational reserves. No additional debt financing is currently anticipated. In contrast to the previous ten years, the current plan focuses on infrastructure and deferred maintenance which total \$32.3 million (81%). This includes building envelope (siding, cladding, and roofs) and mechanical and electrical systems (piping, circuit wiring, heating and cooling systems, smoke/CO2 detectors, and elevators). These items are critical maintenance requirements due to the age of our housing inventory. Interior aesthetic improvements total only \$5.5 million (14%) and include painting, bathroom improvements, interior stairs, carpets, and furniture.

The other major project is the continuation of the Residence Wi-Fi Project initiated in 2016/17. The first year of the project saw the installation of Wi-Fi throughout all rooms in residence. For 2017/18 the project will expand the installation of Wi-Fi to all common and public areas throughout residence at a cost of \$0.4 million to complete the project. The following table summarizes the previous ten year period and the current five year capital plan. For Year 1 of the current plan (2016/17), the amounts shown are the forecasted actual expenditures expected this fiscal year. For Years 2 to 5, the amounts shown are preliminary estimates. Actual costs may vary and will be determined after projects are tendered. One project in particular, the exterior concrete cladding repairs for South Residence, could change estimates significantly. The project has an estimated total project cost of \$27.0 million over six years, starting in Year 2 (2017/18) of this plan and will be tendered in Fall 2016. Any variance between the actual tender for this project and the preliminary estimate could significantly impact the overall capital plan.

5 YEAR CAPITAL RENEWAL PLAN - Student Housing Services						
CAPITAL RENEWAL PLAN - SHS (\$millions)	Year 1	Year 2	Year 3	Year 4	Year 5	Total Plan
Category	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17 to 2020-21
Building Envelope/ Exterior	2.03	5.58	5.97	6.41	5.13	25.11
Mechanical/Electical	2.83	2.22	2.24	1.69	2.53	11.51
Residence WIFI Project	1.83	0.40	-	-	-	2.23
Design Fees & VFA	-	0.20	0.30	0.30	0.30	1.10
Total Funding Required	6.68	8.40	8.51	8.40	7.96	39.95
Contribution from SHS Operations	6.68	8.40	8.51	8.40	7.96	39.95
Net Financing Required	-	-	-	-	-	-

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A.4 Capital Renewal Program – Ancillary – Sustainable Transportation and Parking Services (STPS)

STPS has responsibility for developing, maintaining and operating all parking lots on campus. Many services provided by the STPS align and complement those offered by Physical Resources such as the design, building and maintenance of our on campus transportation infrastructure. Primary responsibilities include: maintaining 22 km of roadways, 56 km of sidewalks and public transit facilities, 4 million square feet of aging transportation network including parking space in 51 parking lots with 5442 parking spaces. STPS also supports other transportation demand initiatives, including public transit and cycling facilities, lighting, signage, storm sewer installation and emergency call stations.

Significant funding is required to design, build, maintain and develop our parking, deferred maintenance and transportation related programs. Opportunities to reduce costs associated with capital projects will continue to be thoroughly investigated. Our South Ring Road, P13 (East of Eccles) and P19 (on College Ave) projects this past summer were completed on time and within budget. Considerable time and cost savings were a result of combining these projects. Our efforts aimed at reducing motor vehicle trips to campus, through our Transportation Demand Management Program (TDM), have been very successful these past several years. Of primary importance is the continued development of our public transit facilities that handle in excess of 2.3 million trips annually. However, the continued loss of parking inventory in the central campus combined with increased event activity have demonstrated the need for additional parking. A multi-level parking structure will need to be considered in the near future.

Information contained in our asphalt study will be continually analyzed as part of the development of our TDM strategy and will be used to refine our short and long-term capital project plan and determine the level of parking revenues required to maintain our aging transportation infrastructure.

In 2017-2018 we are taking on an ambitious capital project plan totaling \$6.0 million to take advantage of favorable market conditions. These expenditures are expected to help address concerns associated with our aging Transportation and Parking infrastructure, and the associated deferred maintenance problem, which is estimated to be in excess of \$25 million for parking related facilities.

Major categories of projects include: parking lot and related equipment maintenance, road and parking lot repairs and reconstruction, storm sewer installations, traffic light systems, public transit facilities, installation of new sidewalks connecting to parking lots, repairs to existing sidewalks, bicycle racks, signage, and personal safety and security programs (lighting, and blue emergency phones). Major construction projects planned for the year 2017/18 total \$5.7 million as follows:

- \$2.5 million has been allocated for the renovation of East Ring Road. New curbs, LED lighting, storm water management systems, asphalt, a redesign to increase efficiency and upgrading to present day construction standards will all be included.
- \$1.2 million has been allocated to parking lots, P23 and P24 (on College Ave) both of which are in very poor condition. Resurfacing has not been done in over 40 years.
- \$1.0 million is being dedicated to the renovation of Powerhouse Lane (north section). Included will be renovations and expansion of parking lot P49. These improvements will accommodate expanded activities related to the Alumni Stadium.

Details

- \$1.0 million is being dedicated to the installation of a long overdue Way-Finding sign project, designed to improve on pedestrian and vehicular movements around campus (project deferred from 2016 2017).

In addition, \$0.300 million has been allocated for the annual road, sidewalk and line painting maintenance program including improving the lighting system using LED fixtures in all future projects. Of a total of \$6.0 million, \$0.300 million will be funded through STPS in year revenues. The remaining \$5.7million will be financed.

A.4 Capital Renewal Program – Main Campus WIFI

Wireless connectivity was originally deployed on the University of Guelph campus in 2005 with a focus on classrooms and shared areas and funded with one-time only monies. Subsequent to that, expansions to wireless were based on requests funded by departments or in other instances when buildings were undergoing renovations and included in the project funding. Given the complexity of building use (many have multiple colleges and/or units housed within them) this approach has resulted in uneven coverage as well as aging technology.

Wireless technology and standards have continued to evolve since our initial investment at a time when campus users (students, faculty and staff) have embraced mobile technology. At the same time, there are early adopters among the faculty who have embraced new teaching technologies that require robust infrastructure. As a result, frustration with this aging and increasingly inadequate infrastructure is becoming more frequent and common. A campus survey was completed during the 2015 fall term with the initial implementation resulting from it focused on deployment of wireless in campus residences at a cost of \$2.2 million funded by Student Housing over summer 2016. The remaining results of the survey represent another 52 buildings on campus that include classrooms, study space and other areas identified by campus IT partners as critical for review and renewal.

The estimate for this subsequent deployment totals \$3.5 million which represents construction costs of \$2.5 million and hardware and related costs of \$1.0 million. Many of the historic wireless access points provide for a maximum of 50 connections while the newer models are higher capacity, providing for upwards of 200 connections. Additionally, the new access points support a wider range of existing standards and offer the potential for innovative uses related to building environmental controls as well as smart building technology. Along with the new access points, a number of the identified buildings also require network switches that will support the full feature set of the new WiFi equipment and can provide adequate and consistent power levels to connected devices such as access points and our VOIP phones.

The provisioning of new switches and access points will require close planning and coordination with Physical Resources. With the announced SIF projects and the need for much of this work to happen during the summer to avoid disrupting classrooms and other impacted spaces, they have estimated the full project to require two summers for completion. Classroom upgrades would be prioritized for the first summer, 2017, with the remaining buildings targeted for summer 2018.

Projections and Compliance with the Capital Debt Policy

The Capital Debt Policy contains five ratios and metrics intended to communicate the affordability of the current debt levels and to be considered prior to any new debt. These indicators are intended to show the impact of financing Capital Projects through debt levels and the burden on the University of any future debt repayment. While these indicators provide a useful tool in the decision making process, they are not normally used or intended to be absolutes in determining appropriate levels of debt. As indicated in the Policy, capital financing decisions are intended to be made in the context of risk/return, cost/benefit of the project under consideration for approval.

The purpose of this section is to provide an update on the policy metrics, along with projections based on known and estimated capital debt financing requirements over the next five years. In producing the projections the actual financial results from 2011 through to 2016 are used as a baseline with the current debt and associated debt payments. This base line is then modified for any known debt, such as the Mitchell extension external debt, and associated payments and modeled into the future. The modeling is assuming no material changes, positive or negative, to the operations of the University and project a best estimate view of debt and debt servicing over the five-year term. This steady state projection is managed through the baseline assumptions presented below.

Borrowing in the following metrics is measured for both external debt and internal financing. The calculation of metrics using internal financing or “Internal Debt” is not typically used by either credit rating agencies or government however it is presented here. The inclusion of internal debt is designed to provide a complete debt profile as if external debt financing been used. This approach is also to ensure the commitment to replenish operating working capital is recorded and assessed in the context of overall capital obligations.

“Baseline” Assumptions for total debt and debt metrics projections;

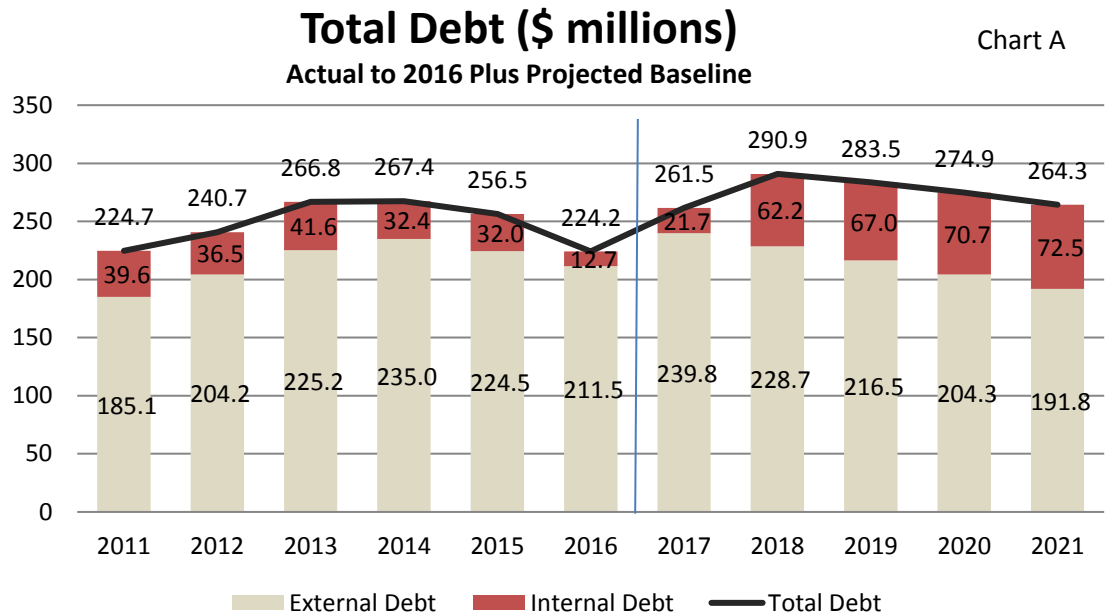
The key assumptions in projected debt and related ratios include the following:

- Amount of borrowing reflects the needs of previously approved financing (for approved capital projects) plus **\$15 million per annum** (p.a.) for the next five year plan (fiscal 2017 – 2021), all assumed to be internal debt.
- Borrowing for the major energy project (internal) and Mitchell Phase 1 project (external), both approved in 2014/2015, will occur in 2016 and 2017 respectively.
- Terms of repayment:
 - Internal debt: 2.5% interest rate; payments are principal plus interest over 10-15 years
 - External borrowing for Mitchell project only is repaid in blended payments over 25 years
- Flat enrolment; no change from 14/15 levels
- 1% increase p.a. in Revenues; 2.5% increase p.a. in Expenses. These amounts effectively take Net Income from \$70 million in fiscal 2014 down to \$40 million in 2018 and \$17 million in 2021.
 - No major pension contribution requirements above that provided in the current annual operating budget assumptions and designated reserves.
- Net Endowment returns of 4% p.a.

Projections and Compliance with the Capital Debt Policy

Total Debt

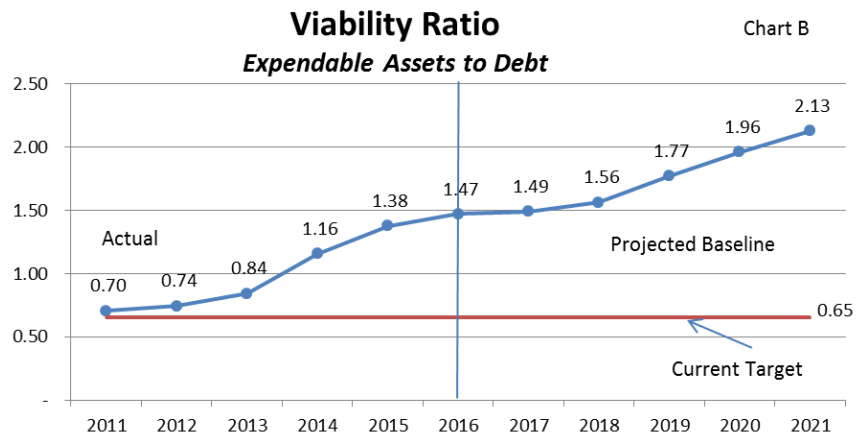
Chart A shows the total projected debt (both internal and external) over this five year plan plus the baseline scenario for the following five years. It should be noted that even with \$15 million in projected new debt each year, total debt declines. This is the result of principal repayments which increase over the time period and eventually will exceed the \$15 million level. The increases in 2016 and 2017 (\$37 million and \$29 million respectively) reflect the borrowing for the two major projects of 2014/2015; the energy retro fit project and the Mitchell Phase 1 building.



Policy Debt Management Metrics - The following includes actual results.

1. Viability Ratio: this key metric in monitoring debt capacity measures how many times expendable net assets could pay for outstanding debt.

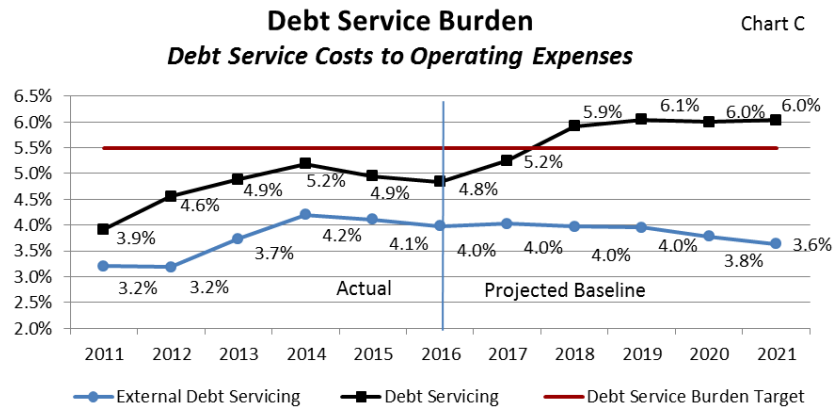
Projections show very positive results given the assumptions of continuing net income, and declining debt. This ratio is very sensitive to net asset changes e.g., a major downturn in the financial markets (impacting endowments) and net operating deficits will quickly reverse this positive baseline projection.



Projections and Compliance with Capital Debt Policy

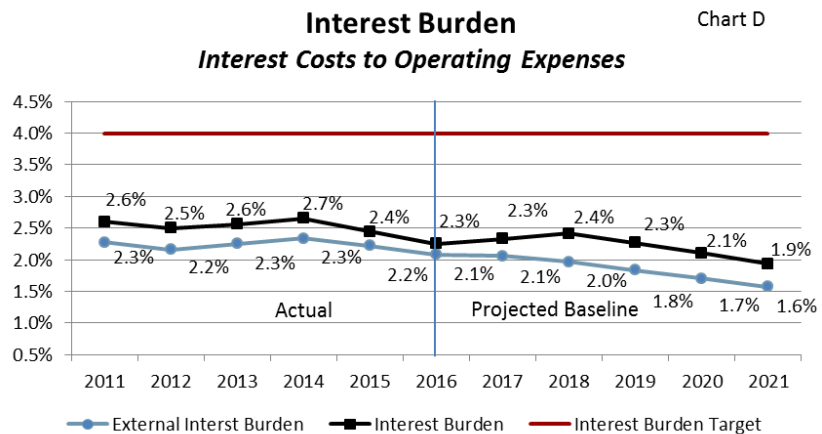
2. Debt Service Burden is an affordability measure that tracks the costs of servicing (both internal and external) debt as a portion of total operating expenses.

The increase through to 2019 reflects the initial jump due to financing of the Mitchell Phase 1 project and the energy retrofit project. Both of these projects were approved in 2014.



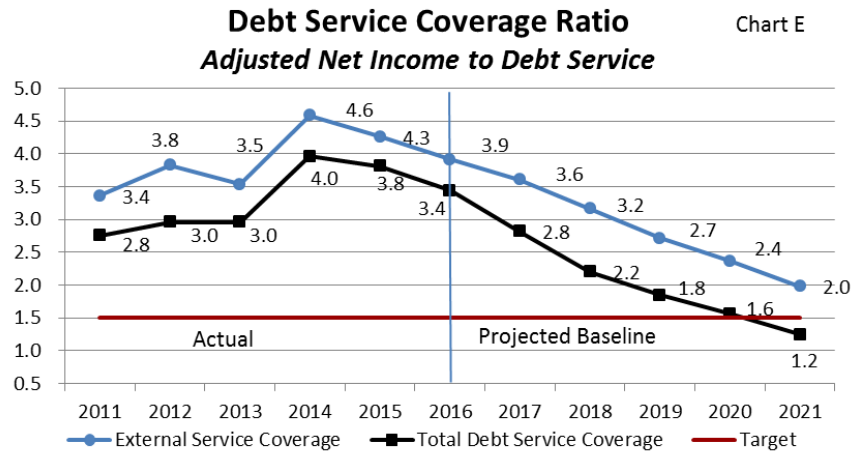
3. Interest Burden is another affordability measure similar to Debt Service Burden only recording interest costs (internal and external) only.

The positive results relative to the benchmark reflect low interest rates and net repayment through the baseline period.



Projections and Compliance with the Capital Debt Policy

4. Debt Service Coverage results below reflects the expected decline in net income of the current levels which are considered to be overly positive for the next five year period. In effect, it shows a rate of decline in net revenues greater than any slowing or decline of debt servicing and overall debt levels.



5. Debt to FTE is a common measure of overall size of debt (internal and external) relative to enrolment. Debt levels, assuming flat enrolment show levels that are higher than the benchmark rate of \$10,000.

