



# 2016-2020 Capital Plan

University of  
Lethbridge



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## 2 EXECUTIVE SUMMARY

The University of Lethbridge updates its Capital Plan on an annual basis. The 2016-2020 Capital Plan forms the University's request to Government for funding of priority capital projects over the next five years.

The Capital Plan continues to complement and respond to University of Lethbridge key strategic documents including but not limited to its Strategic Plan, the Comprehensive Institutional Plan, and the Campus Master Plan.

The University of Lethbridge Capital Plan also strives to align itself with Government goals, business plans and other key Government strategic documents. University Senior Administration communicates regularly and works closely with Ministers and other Government officials to discuss the capital needs and priorities of the institution. These relations will continue to be important as the University sets new capital priorities and addresses issues affecting existing facilities.

The highest capital priority of the University of Lethbridge is a new science & academic building, the Destination Project – Phase I, in order to construct up to date science facilities, accommodate the University's strong commitment to research, and address significant health and safety issues existing in the science facilities in University Hall. To continue to excel in research and to fulfill its mandate as a comprehensive academic and research institution with more emphasis on graduate student education, the University requires new facilities that will provide more dedicated space for these programs and functions. New science facilities will increase the capacity for training by providing space for principal investigators, new graduate and undergraduate students, and technical support personnel. The new facility is also essential in order to alleviate health and safety issues that exist as a result of having student residences in the same building as research labs. The University gratefully acknowledges the Government's confirmed \$260 million investment in the Destination Project – Phase I. We look forward to breaking ground on the Academic and Science Building in May 2016, and to beginning the planning for Phase II of the Destination Project.

The University currently has 43 buildings on campus totaling 199,104 gross square metres (gsm) averaging 25 years of age. Due to the aging of the buildings, deferred maintenance on existing facilities continues to be a matter of concern. Although the data shows that the University does maintain its facilities better than most other post-secondary institutions, the large existing deferred maintenance balance is still of concern for the University.

The University believes that energy efficiency and ease of maintenance are integral to the planning of all capital projects. The University follows the principles of Leadership in Energy and Environmental Design (LEED) in building sustainable facilities that are better for the environmental and at the same time minimizing the amount of ongoing maintenance and operating costs to the University. Three buildings at the University hold Silver LEED status: the 1<sup>st</sup> Choice Savings Centre for Sport & Wellness, the Alberta Water and Environmental Science Building, and Markin Hall. The Science and Academic Building of the Destination Project includes Sustainable Design as one of five Charter Goals for the project, and is wholly integrating sustainable initiatives that will minimize energy use, emissions, and life cycle costs, while providing an optimal research, teaching, and learning environment.

## 2.1 Capital Priorities Summary

The University uses Alberta Infrastructure's BLIMS system for categorizing capital projects into Preservation, Expansion, or New Facilities. The following are the University's identified priority capital projects. More information is described in Section 5 ("Priority Capital Projects") and Appendix C.

Table 1: Capital Priorities Summary

	PROJECTS	New Facilities	Preservation /Renovation	Estimated Project Cost (January 2016 dollars)
1	Destination Project Phase II			
	- Planning	-	10,000,000	10,000,000
	- University Hall Renewal	-	55,000,000	55,000,000
	- Energy/Utility Centre (replacement equipment)	-	20,000,000	20,000,000
	- University Hall Envelope Repairs	-	1,400,000	1,400,000
	- University Hall Window Replacement	-	4,000,000	4,000,000
	- Canadian Centre for Neuroscience (CCBN) Building Renewal	-	15,000,000	15,000,000
	- Visual Art Centre	-	34,300,000	34,300,000
	<i>Destination Project Phase II Total:</i>	-	139,700,000	139,700,000
2	Student Residences - upgrade University Hall residences	-	8,500,000	8,500,000
3	Student Residences - Aperture Park Phase IV	42,400,000	-	42,400,000
		42,400,000	8,500,000	50,900,000
	<b>TOTAL PRIORITY CAPITAL PROJECTS</b>	<b>\$ 42,400,000</b>	<b>\$ 148,200,000</b>	<b>\$ 190,600,000</b>
	<b>Projects in Progress</b>			
1	Destination Project Phase I - Science and Academic Building			280,000,000
2	Student Apartments - Envelope Repairs			13,000,000
	<b>Total Projects in Progress</b>			<b>\$ 293,000,000</b>

Note - Estimated project costs are in current dollars (January 2016) and will fluctuate depending on construction start dates.

## 2.2 Alignment with Strategic Priorities

The University of Lethbridge updates its Capital Plan on an annual basis for submission to the Government of Alberta. The Capital Plan is used to help inform the Government on key initiatives and directions of the University. This update of the Capital Plan will share information about our current situation, provide a review of the previous year and then discuss our capital priorities and key initiatives over the next five years.

The Capital Plan continues to complement and respond to University of Lethbridge key strategic documents including but not limited to its Strategic Plan 2014-2019, the Comprehensive Institutional Plan, and the Campus Master Plan. The Campus Master Plan establishes a 25 year vision for the campus, identifying immediate programmatic needs as well as clear directions for the longer-term physical evolution of the campus. The Capital Plan describes in more detail the current state and shorter-term needs of the campus. There are also many key drivers of the Capital Plan that the University monitors closely and plans for accordingly, including additional program space requirements, staffing levels, deferred maintenance, Infrastructure Maintenance Program (IMP) funding, the University's operating budget, and student enrolment expectations.

The University of Lethbridge Capital Plan also strives to align itself with Government goals, business plans and other key Government strategic documents. University Senior Administration communicates regularly and works closely with Ministers and other Government officials to discuss the capital needs and priorities of the institution. These relations continue to be important as the University sets new capital priorities and addresses issues affecting existing capital facilities.

In addition to identifying the University's priority capital projects for Government, the Capital Plan also focuses on important issues like deferred maintenance, lights-on funding, space constraints, and changing technology, all of which have an effect on the University's growing capital infrastructure. The Plan also acknowledges the important role that project planning and, when appropriate, predesign play in advancing capital projects and remaining responsive to funding opportunities. Funding to support planning and pre-design activities enables the University to build business cases and finalize the scope of projects, and be prepared to take advantage of funding opportunities that present themselves. The funding used to support planning for the Destination Project, for example, has enabled the University to advance the project to the shovel-ready phase, better enabling the University to put forth an accurate request for funding to government at the same time as investigating alternative funding models, such as philanthropy and strategic borrowing.

## 3 REVIEW OF PREVIOUS YEAR

### 3.1 Major Capital Projects

The following projects were started and/or completed during the previous year:

Destination Project – Phase I: This project is the highest capital priority project for the University. The University received \$2.7 million in planning funds from Advanced Education and Technology for the Destination Project – Phase I prior to 2013 and an additional \$10 million in fiscal 2014-15 year to advance the planning of the project. In April 2016, \$248 million from the Government was confirmed to support this project. Construction will begin for Phase I of the Destination Project in May 2016.

UCA North Patio Pavers Replacement: The patio pavers and raised bench sections on the patio north of the University Centre for the Arts were replaced. Planter boxes were installed, along with roof drains. Phase I of this work was completed in Fall 2014 at a total cost of \$2.1 million. Phase II of this project saw exterior stairs from Level 4 to Level 6 at the North Patio being built. This second phase of the project was completed in Fall 2015 at a cost of \$256,000.

### 3.2 Funded Capital Projects Summary

The following table shows the funded capital projects, both completed and in progress over the last ten years. Over the past 20-year period, the University funded 44% of the completed capital projects with 44% coming from government grants and research agencies. Section three of this document entitled "The Plan" will show that new, expansion, and preservation projects will require the majority of funding to come from government grants and research agencies as the University limited funding sources, both internal and through fundraising efforts, to fund the total project costs of major capital projects.

Table 2: MAJOR CAPITAL PROJECTS FUNDING SOURCE SUMMARY

PROJECT	YEAR	PROJECT COST	FUNDING SOURCES					
			University	Donations	City of Leth	Gov't *	TOTAL	
<b>COMPLETED PROJECTS:</b>								
Hepler Hall	98/99	\$ 747,894	\$ 747,894	\$ -	\$ -	\$ -	\$ 747,894	
Art Storage Vault	98/99	320,088	320,088	-	-	-	320,088	
PE Classroom Annex	98/99	1,107,750	1,107,750	-	-	-	1,107,750	
Anderson Hall	99/00	5,812,919	5,812,919	-	-	-	5,812,919	
Library Storage Building	99/00	67,282	67,282	-	-	-	67,282	
University Library	01/02	33,668,656	19,345,218	9,567,438	-	4,756,000	33,668,656	
Canadian Centre for Behavioural NeuroScience (CCBN)	01/02	8,593,438	783,775	2,525	-	7,807,138	8,593,438	
Student Residences (townhomes)	03/04	5,896,598	5,896,598	-	-	-	5,896,598	
CCBN Expansion	06/07	3,265,148	1,030,613	301,500	-	1,933,035	3,265,148	
1st Choice Savings Centre for Sport & Wellness	06/07	30,776,265	20,474,655	4,992,099	5,300,000	9,511	30,776,265	
Parkway Service Complex	07/08	6,053,990	353,990	-	-	5,700,000	6,053,990	
Turcotte Hall Expansion	07/08	10,866,161	8,566,161	-	-	2,300,000	10,866,161	
Alberta Water & Environmental Science Building -Phase 1	08/09	24,112,903	557,658	103,325	-	23,451,920	24,112,903	
Community Sports Stadium	09/10	12,098,444	4,732,951	53,979	3,723,439	3,588,075	12,098,444	
Daycare Facility	09/10	1,967,078	1,612,078	280,000	-	75,000	1,967,078	
Markin Hall	10/11	54,296,753	24,500	4,272,253	-	50,000,000	54,296,753	
Student Residences (Mount Blakiston House)	13/14	32,000,000	29,997,058	2,942	2,000,000	-	32,000,000	
Tunnel & South Plaza Replacement	13/14	3,457,987	-	-	-	3,457,987	3,457,987	
UCA North Patio Pavers Replacement	14/15	1,950,703	-	-	-	1,950,703	1,950,703	
Parking Lots E, F, FS Design/Overlay	14/15	4,074,825	4,074,825	-	-	-	4,074,825	
		<b>\$ 241,134,883</b>	<b>\$105,506,013</b>	<b>\$ 19,576,061</b>	<b>\$ 11,023,439</b>	<b>\$105,029,370</b>	<b>\$ 241,134,883</b>	
		% Total Project Cost	44%	8%	5%	44%	100%	
<b>PROJECTS IN PROGRESS:</b>								
Student Apartments - Envelope Repairs	17/18	13,000,000	13,000,000	-	-	-	13,000,000	
Destination Project - Phase I - Science & Academic Building	18/19	280,000,000	500,000	19,500,000	-	260,000,000	280,000,000	
Destination Project - Phase II	19/20	139,700,000	-	-	-	139,700,000	139,700,000	
		<b>\$ 432,700,000</b>	<b>\$ 13,500,000</b>	<b>\$ 19,500,000</b>	<b>\$ -</b>	<b>\$ 399,700,000</b>	<b>\$ 432,700,000</b>	
		% Total Project Cost	3%	5%	0%	92%	100%	

\*Government money includes funds from Advanced Education, Alberta Infrastructure and Provincial/Federal Research agencies.

### 3.3 Highlights of Successes

Destination 2020 Vision & Strategy - 2014-2019 Strategic Plan: The current Strategic Plan was released in Spring 2014. There was extensive consultation within the University community and external stakeholders in updating the plan. The plan strengthens the University's commitments of its Capital Plan. From the Strategic Plan:

*"High quality is central to all that we do. Our commitment to maintaining high quality undergraduate and graduate academic programs is important to fostering a better society.... High quality facilities and services support our institution and its students, staff, and academic staff."*

#### Government funding for Preservation Projects:

Advanced Education (AE) provided funding in part to be used for the preservation of supported infrastructure. The following table shows how much of this funding has been used to date.

<b>Preservation Project</b>	<b>Funding Received from IAE</b>	<b>Balance Remaining (Dec 2015)</b>	<b>Commitments</b>	<b>Estimated Date for Spending Commitments</b>
Safety Systems Upgrade project in University Hall	\$17,000,000	\$3,302,150	\$800,000	October 31, 2016
Structure and Building Envelope project in University Hall	\$5,415,000	\$879,104	\$60,000	March 31, 2017

Of the remaining \$4.4 million in the Safety Systems Upgrade project, \$800,000 has been allocated to essential projects for 2015/16. These funds will continue to be evaluated on a yearly basis and committed to necessary projects; it is intended that any remaining grant funding will be left in reserve to be allocated to the University Hall upgrades necessary after portions of University Hall are vacated as a result of program moves into the new science and academic building (Destination Project – Phase I).

The balance in the Structure and Building Envelope project will also continue to be evaluated on a yearly basis and committed to necessary projects, including structural monitoring and remediation work for University Hall.

#### Government funding for the Destination Project – Phase I:

Advanced Education approved a total of \$260 million funding for the new science and academic building (Destination Project – Phase I), which is the highest capital priority for the University. The Destination Project will construct up to date science facilities to accommodate the University's commitment to research, enabling the University to continue to excel in research and to further our role as a comprehensive university by providing more dedicated space for these programs and functions. New science facilities will increase capacity by providing appropriate space for principal investigators, new graduate and undergraduate students, and technical support personnel. The new facility is also essential

in order to alleviate health and safety issues that exist as a result of having student residences in the same building as research labs.

### Energy Management and Sustainability

Along with managing the University's energy requirements and usage, the University has improved the financial sustainability of its energy management by utilising energy contracts. Work commenced in Fall 2015 to engage vendors in an electrical supply competition as the present contract with Enmax expires Dec 31, 2016. Ideally, the new contract will be for a term of at least 3 years, and possibly as long as 5. Four electrical vendors responded to the request for interest for electrical services. Efforts continue, with a final negotiated supply contract expected by April 2016. The new electrical supply contract is being calculated such that it includes the construction period and full operation of the Destination Project Science & Academic Building.

Options for securing fixed natural gas pricing have also been explored through Winter 2015. However, with the fall in fossil energy commodity prices, and with an extremely mild winter, spot market purchasing has been more favourable. These options will continue to be investigated through Summer and Fall 2016, and a fixed price option may be utilized should natural gas pricing start to show longer term price increase trends.

## 4 CURRENT SITUATION

### 4.1 State of Assets

The University currently has 43 buildings on campus totaling 199,104 gsm and averaging 25.3 years of age. The following chart shows the breakdown by building age and area.

FIGURE 1: NUMBER OF BUILDINGS BY AGE

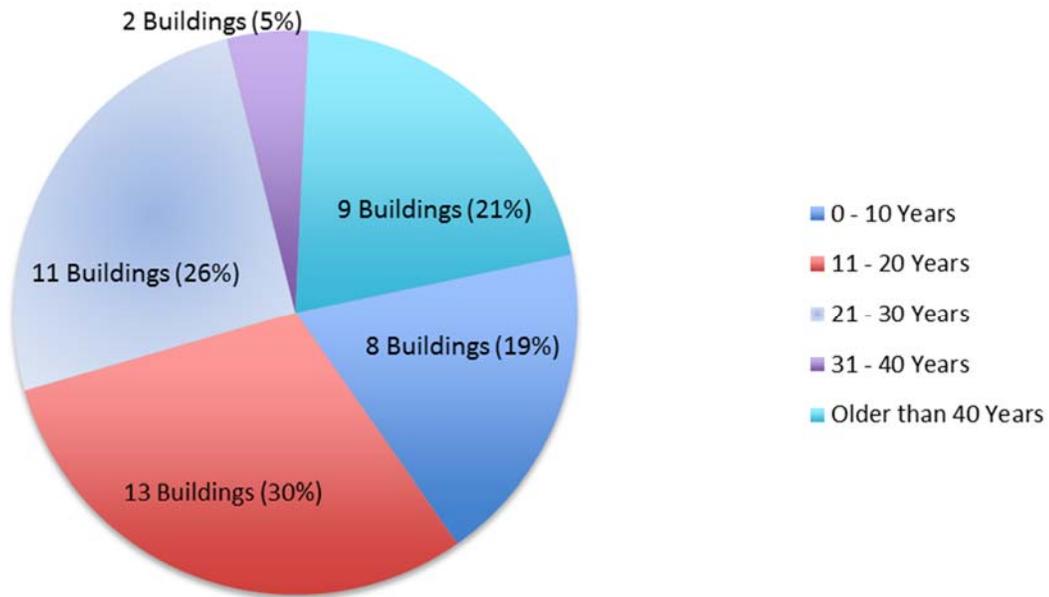
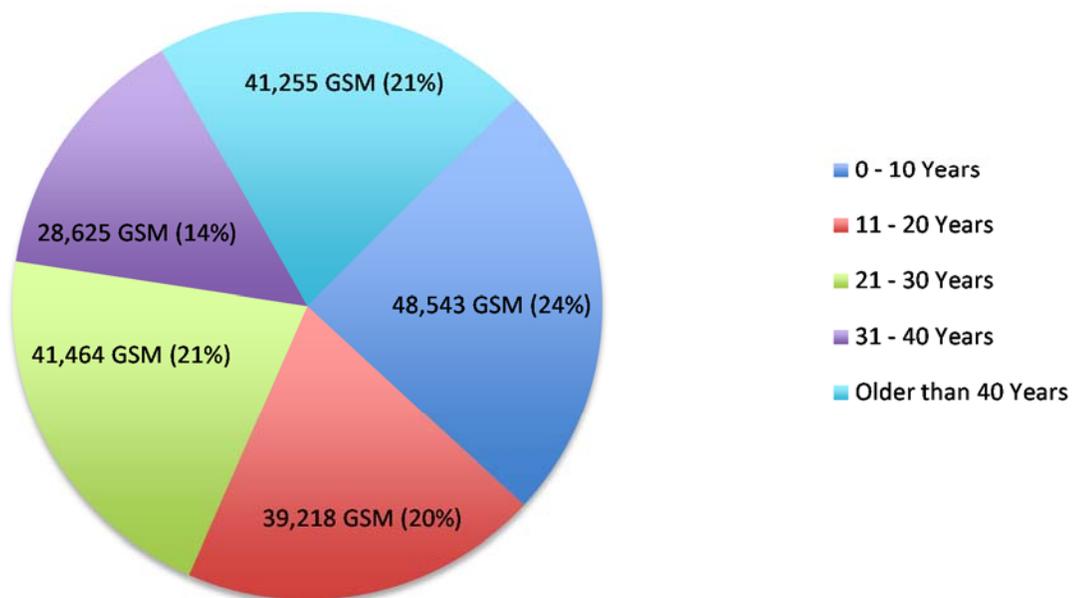


FIGURE 2: BUILDING GROSS SQUARE METRES (GSM) BY AGE



## Deferred Maintenance

In 2007 Advanced Education provided \$25,915,000 in capital grants to help address the deferred maintenance projects backlog. The majority of this funding has been used to reduce deferred maintenance in the University Hall structure, building envelope and safety system upgrades.

The University has a Facility Condition Index (FCI) on all University buildings estimated at 13.0%. The FCI is the ratio of the cost to correct current and future physical condition deficiencies, relative to current facility replacement values. The percentages are calculated by dividing the deferred maintenance amount per facility by the facility's replacement cost.

The University is grateful to Advanced Education and Alberta Infrastructure for providing funding support to help deal with these deficiencies, which the University recognises is significantly more than other Provincial Governments provide to post-secondary institutions. It continues to be a challenge to meet FCI deficiencies but the University is making progress in addressing this issue.

Alberta Infrastructure's interpretation of FCI values for building infrastructure is as follows (from Alberta Infrastructure's Annual Report 2014-2015):

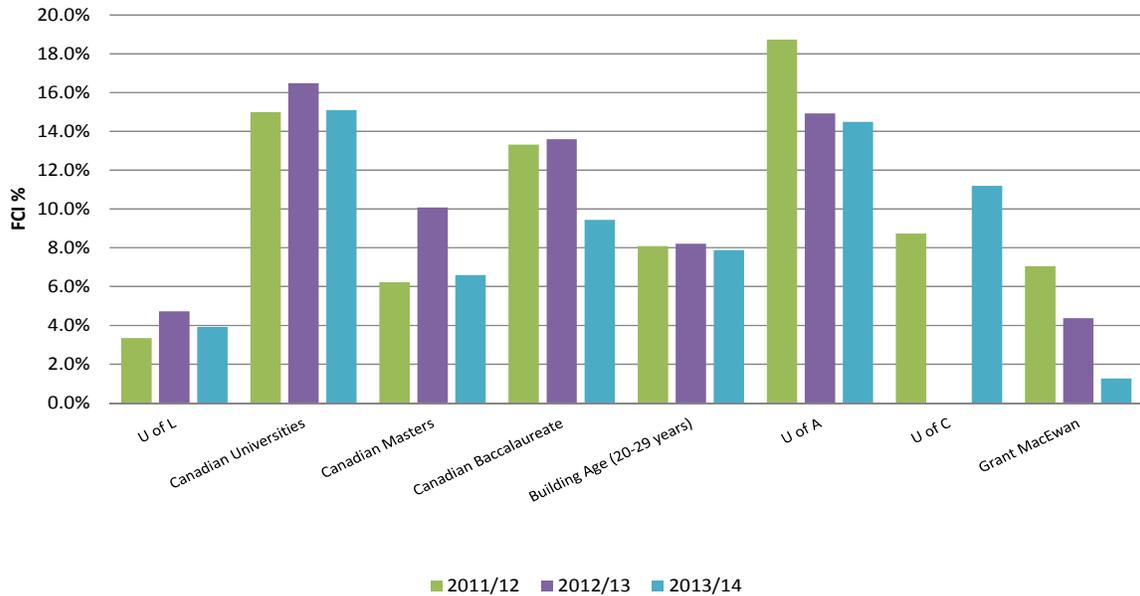
Condition	FCI Definition	
Good	Facilities with an FCI of less than 15%	Adequate for intended use and expected to provide continued service life with average maintenance.
Fair	Facilities with an FCI that is equal to or greater than 15%, or equal to or less than 40%	Aging components are nearing the end of their life cycle and require additional expenditures for renewal or refurbishing.
Poor	Facilities with an FCI of greater than 40%	Upgrading is required to comply with minimum codes or standards and deterioration has reached the point where major repairs or replacement are necessary.

**Note: Data described in this section will vary slightly as a result of when it was reported and the way data is gathered for various sources.**

Note that Ancillary Services facilities, including student residences, are not included in the following data as these facilities are not reported through the Provincial Government's reporting systems as they are not considered government owned assets. The Provincial Government does not provide funding (capital, operating or deferred maintenance funds) for ancillary facilities.

The following data was reported by APPA: The Association of Higher Education Facilities Officers:

FIGURE 3: DEFERRED MAINTENANCE BACKLOG BY INSTITUTION TYPE (APPA DATA)



Figures 4 and 5 show the total deferred maintenance on University buildings from data provided by Alberta Infrastructure as of January 2016. Total deferred maintenance was estimated at \$137.6 million. In order to ensure facilities are maintained properly, it is recommended that as a minimum \$12.7 million in deferred maintenance should be addressed between 2016 and 2019, including ancillary and residential buildings. Note that these numbers may differ somewhat from those reported in previous years, as Alberta Infrastructure has changed its facility monitoring software from Real Estate Capital Asset Priority Planning (RECAPP) to VFA, a database program used to track and record information on the condition and maintenance of facilities.

FIGURE 4: TOTAL DEFERRED MAINTENANCE ON UNIVERSITY BUILDINGS BY RENEWAL YEAR

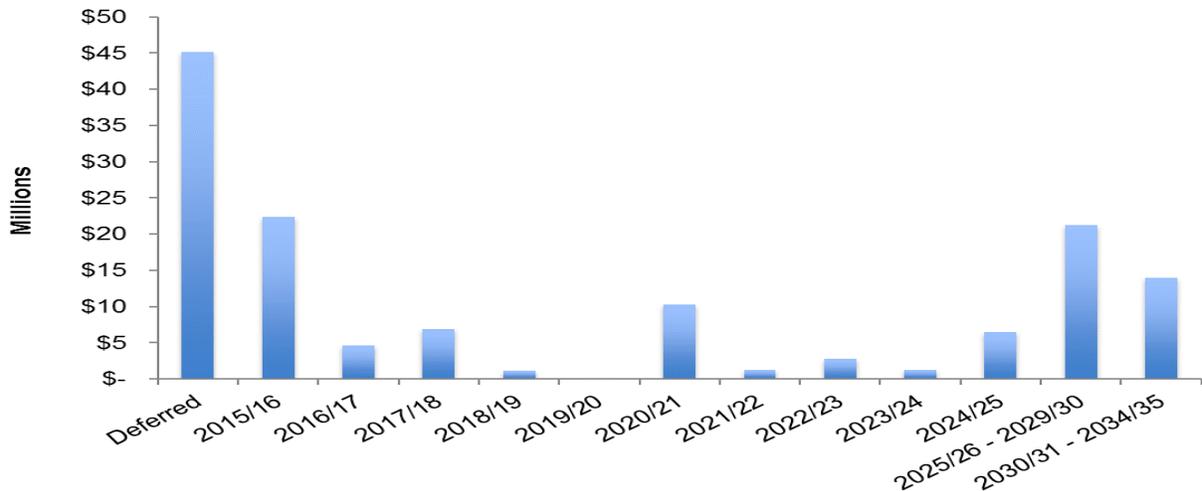


FIGURE 5: TOTAL DEFERRED MAINTENANCE ON UNIVERSITY BUILDINGS BY BUILDING COMPONENT

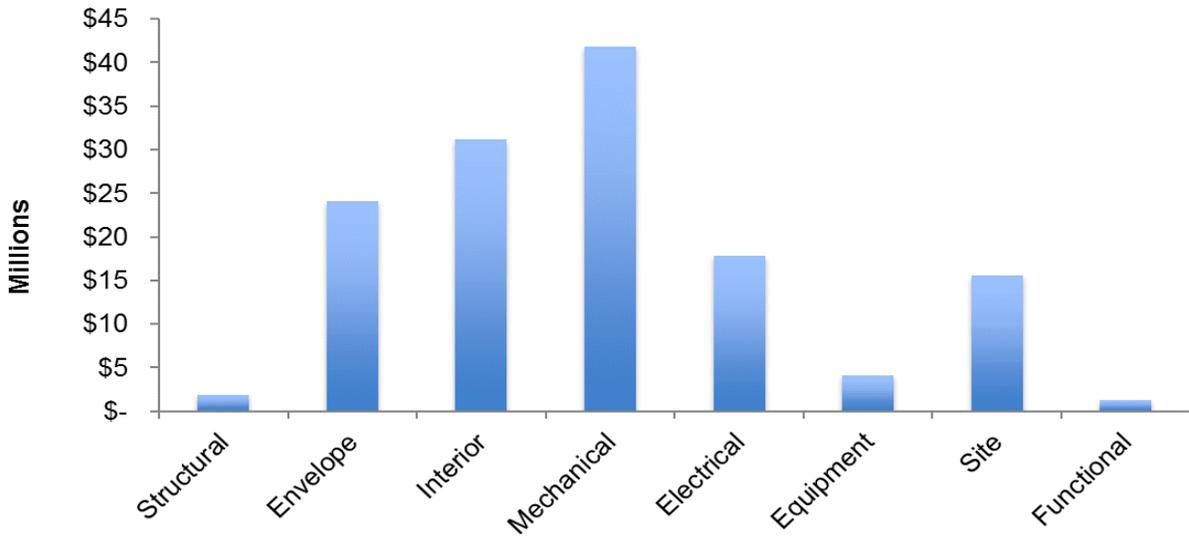
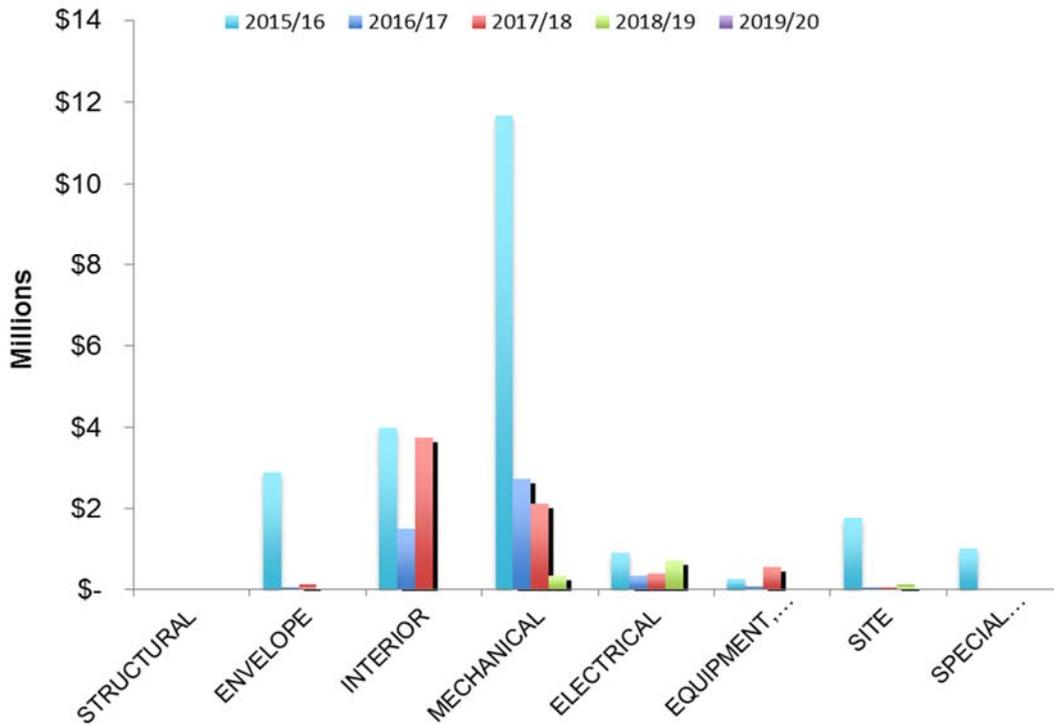
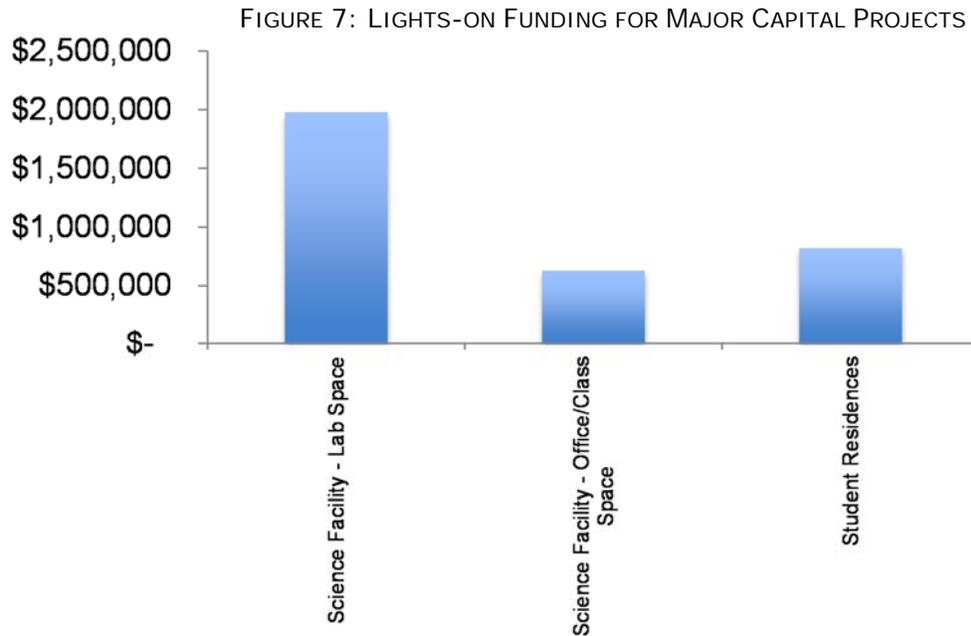


FIGURE 6: 2015-2019 DEFERRED MAINTENANCE ON UNIVERSITY BUILDINGS BY BUILDING COMPONENT AND RENEWAL YEAR



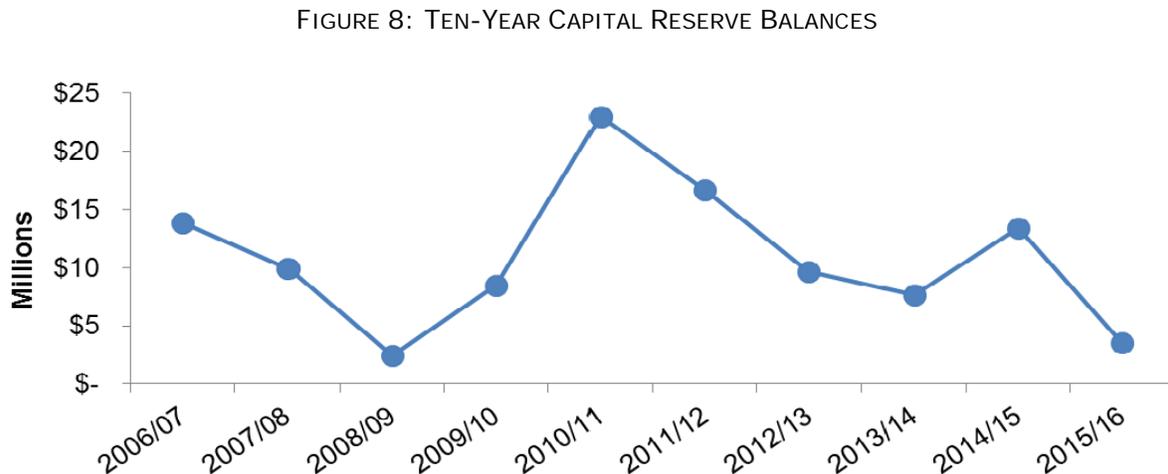
## 4.2 Lights-on Funding

The University's Capital Plan includes the creation or expansion of the following major capital projects over the next five years: Destination Project – Phases I & II) and Student Residences. It is estimated that \$3.4 million per year in lights-on-funding will be required to maintain these facilities once they are completed.



## 4.3 Capital Reserves

University reserves are set up from time to time to be used for special purposes with one-time dollars realised from annual net surpluses. Over the years the reserve balances have increased and decreased in relation to the funding of various new building construction projects. The University cannot continue to rely on internally designated capital reserves to make up shortfalls in capital budgets due to the current fiscal environment and restraints on operating budgets. The following figure shows the last ten-year capital reserve balances for the University.



#### 4.4 Project Cost Escalations

Future cost escalations are expected to continue to be an issue for the University and the Government. Shown in the table below is a forecast of what escalated construction costs may be over the next year, five years, and ten years, using both a minimal escalation of 1% to a 5% projected escalation of construction costs. Using inflation increases of 1% to 5% per year, five years from now the total New and Preservation Projects budget is estimated to be \$24 to \$131 million more and in ten years \$49 to \$297 million more than the current estimated construction costs. The below figures are illustrations of the impact of construction cost escalations on project budgets but no estimates of what the actual cost escalations will be over the next 5 to 10 years due to the volatility of the market.

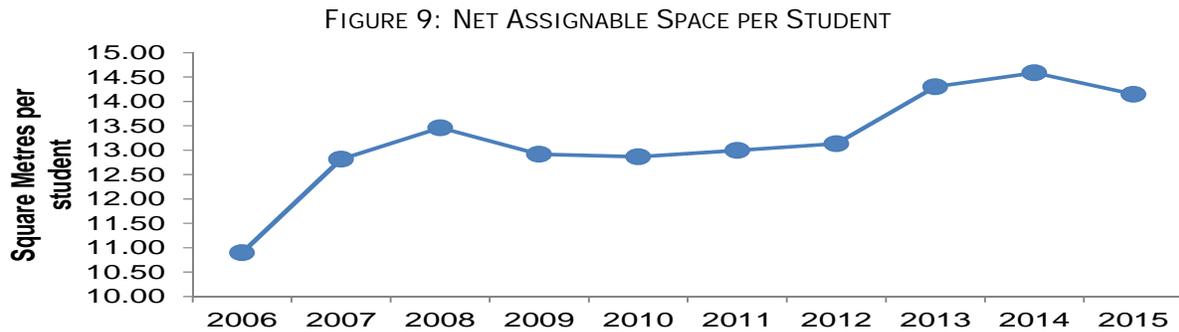
One major factor that has escalated construction project costs over the past year is the increase in the US dollar exchange rate. Generally, there is a significant amount of construction goods and equipment that are required to be purchased from US vendors and this has put a lot of pressure on project budgets. This factor will vary year over year but it is not expected to subside.

TABLE 3: FUTURE CONSTRUCTION COST ESCALATIONS

PROJECTS	Project Type	Project Cost (January 2016)	Over 1 Year		Over 5 Years		Over 10 Years	
			1%	5%	1%	5%	1%	5%
Destination Project Phase II	Preservation/Renovation	\$ 139,700,000	\$ 141,097,000	\$ 146,685,000	\$ 146,826,104	\$ 178,296,534	\$ 154,315,711	\$ 227,556,579
Student Residences - upgrade University Hall residences	Preservation/Renovation	\$ 8,500,000	\$ 8,585,000	\$ 8,925,000	\$ 8,933,585	\$ 10,848,393	\$ 9,389,288	\$ 13,845,604
Student Residences - Aperture Park Phase IV	New Facilities	\$ 42,400,000	\$ 42,824,000	\$ 44,520,000	\$ 44,562,826	\$ 54,114,338	\$ 46,835,978	\$ 69,065,132
<b>Total Capital Cost</b>		<b>\$190,600,000</b>	<b>\$192,506,000</b>	<b>\$200,130,000</b>	<b>\$200,322,516</b>	<b>\$243,259,266</b>	<b>\$210,540,977</b>	<b>\$310,467,316</b>
<b>Increase in Cost</b>			<b>\$ 1,906,000</b>	<b>\$ 9,530,000</b>	<b>\$ 9,722,516</b>	<b>\$ 52,659,266</b>	<b>\$ 19,940,977</b>	<b>\$119,867,316</b>

## 4.5 Space

Over the past 10 years the University has seen a growth in new buildings on campus. These new buildings have helped to ease some of the space pressures the University has been faced with in order to accommodate teaching and research needs, as well as enhance student learning experiences. As shown in the graph below the net assignable space per student has increased slightly over the last 10 years.

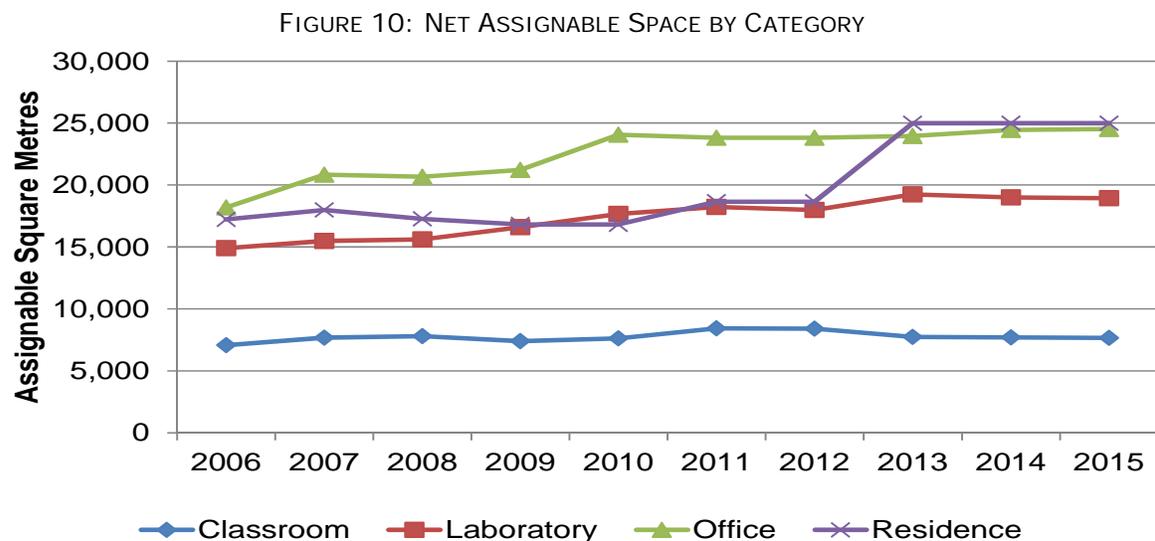


The majority of space additions over the past ten years were for Markin Hall, 1<sup>st</sup> Choice Savings Centre for Sport and Wellness, expansion to Turcotte Hall, Library Building, classrooms and offices, and new student residences in Aperture Park. There continues to be a critical need for research and student teaching lab spaces. The addition of Markin Hall in 2010 and renovations to the vacated spaces in University Hall and Anderson Hall provided much needed additional space to accommodate our current enrolment and office needs. With the approval of the Destination Project, once it is completed this should go a long way to addressing our current space needs.

The University has developed its capital plan to address the following four primary spaces:

- Classrooms;
- Laboratory;
- Offices; and,
- Residences.

Figure 10 shows the assignable space by use category over the past 10 years.



## 4.6 Information Technology

The University of Lethbridge continues to invest in Information Technology (IT), recognizing the critical role it plays in delivering institutional strategic objectives, driving efficiency, and the effective use of resources in support of sustainability. The U of L has completed the first phase of significant network infrastructure improvements and will be moving into phase two later this year. Effort has also been focused on enhancing the student experience, information management and security awareness, administrative systems enhancements, and IT governance to meet the demands of faculty, students, and staff to support our strategic directions. The U of L is committed to providing quality technology support to teaching staff, researchers, students, and support staff in the delivery of academic and research programs.

### *Network Infrastructure Improvements:*

Phase one of the Network Infrastructure Improvements project has been completed and planning has started for phase two. Phase one improved connectivity between all Lethbridge Campus buildings with classroom spaces in them and phase two will focus on extended buildings and residences. Phase one has significantly improved wireless access in learning spaces on campus which was critical to support the growing number of devices we are seeing students bring to campus, an average of roughly three per person, and to support the emergence of digital learning resources. Also, network speeds between buildings was increased from 1 Gbps to 10+ Gbps which, when upgrades to our Cybera access are completed, will improve access for researchers to resources like WestGrid and other post-secondary shared resources. Cybera has confirmed that the U of L is scheduled for an upgrade this year from 1 Gbps to 10 Gbps which represents a significant delay as this was initially scheduled for completion in 2015.

### *Enhanced Student Experience:*

Improved wireless access supporting more devices and high connection speeds across the majority of campus, and enhanced coverage in high traffic areas and outdoor spaces has continued to improve the student experience on campus. Over the coming year there are plans to introduce new features into the mobile app and student portal to further enhance their access to resources and information.

### *Process and Controls Continuous Improvement:*

The U of L introduced new standards and controls related to cloud services, data classification, and data storage to help faculty, staff and students understand the types of data they are working with, the security considerations associated with the data types, and where it should be stored. The Information Security Office has also focused on education and awareness activities to help faculty, staff, and students better protect their personal information and institutional information. Continued awareness and training activities are planned for the coming year to coincide with information security awareness month in October.

### *Administrative System Enhancements:*

The Banner Revitalization program is continuing with administrative processes being streamlined to improve efficiency, increase responsiveness to administrative requirements, and minimize operational overhead. With the progress to date it is anticipated the first phase of revitalization will be launched in production by December of 2016.

### *IT Governance:*

Progress continues on IT Governance with enhancements being made to the overarching IT Steering Committee including expanding membership to better represent the needs of researchers on campus. New committees and working groups will be introduced over the

coming year to improve our data governance and better utilize information assets to achieve institutional outcomes.

*Information Management and Security:*

The University of Lethbridge recognizes the importance of information security and will continue to build upon the successful education and awareness program launched last year. The information security awareness training program is equipping faculty, staff, and students with the knowledge and tools to protect themselves and the University of Lethbridge's information assets from various threats.

*Capital Replacement of IT Assets*

The University has invested a great deal in its IT assets, which has enhanced the operations of the University and the student experience. As the assets age, though, the University must provide for the cost of replacement, again putting additional pressure on the finances of the institution. The University has over \$5 million in IT assets and expects the minimum requirement to replace the assets at approximately \$1 million per year, taking into consideration the lifecycle of the assets.

### 4.7 Facility Performance Indicators

The University continues to perform well when comparing data from the Association of Higher Education Facilities Officers (APPA) survey. APPA provides the most comprehensive data available on facilities management costs and staffing information in North America. The graphs below show how the University's maintenance and operations compare to other institutions (2013-14 data) (this is the latest data available).

It is important to note that in some of the graphs, the U of L data shows that our expenditures on a per Full Time Equivalent (FTE) student basis are higher than comparable institutions. There are a number of factors that influence these data. The comparisons do not take into account regional factors, in particular the funding levels in various regions. In the primarily US based Rocky Mountain APPA institutions were faced with much more significant fiscal reductions in the past few years than the U of L and this is reflected in the funding levels for facilities operations. The labour costs in Alberta also tend to be higher than in other regions. The U of L enrollment had also declined slightly in the latest years reflected in the APPA survey, and this is reflected in the data. When comparing against Alberta and Western Canadian institutions, the U of L fares well in comparison of costs.

FIGURE 11: EXPENDITURES ON GROUNDS (\$/ACRE)

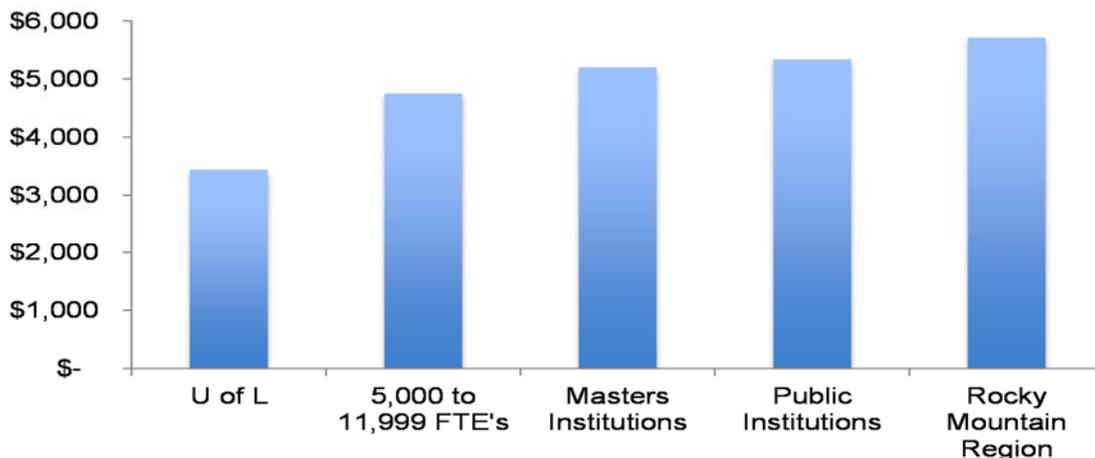


FIGURE 12: OPERATING COSTS PER STUDENT FTE

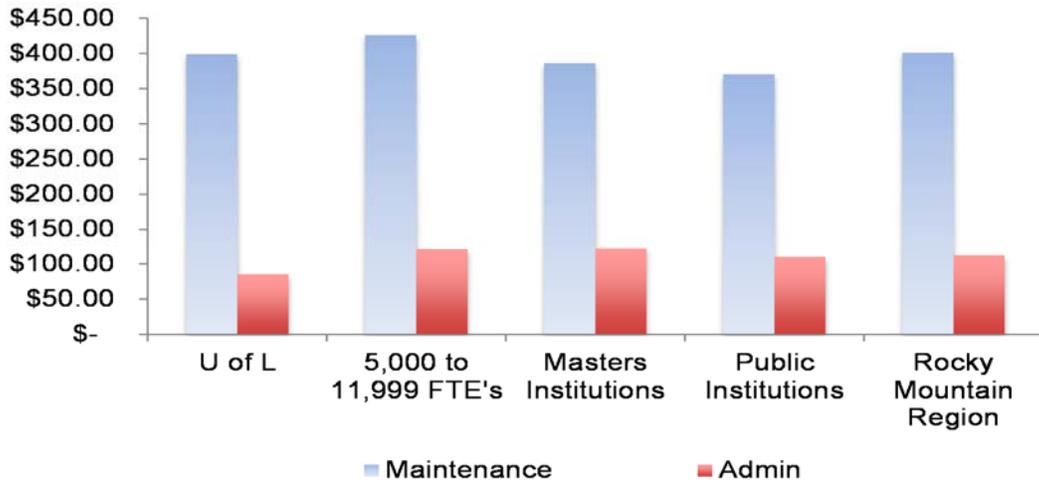


FIGURE 13: MAINTENANCE COSTS PER STUDENT FTE

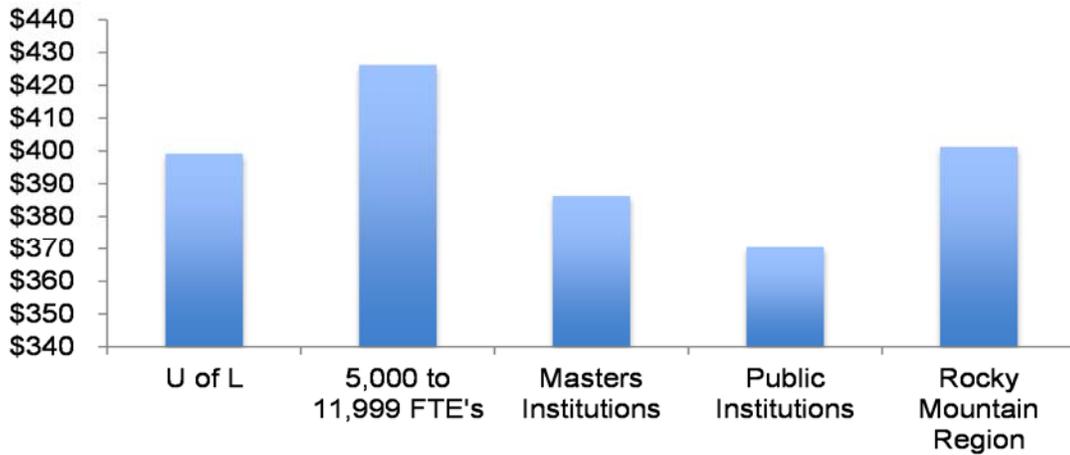


FIGURE 14: CUSTODIAL COSTS PER STUDENT FTE

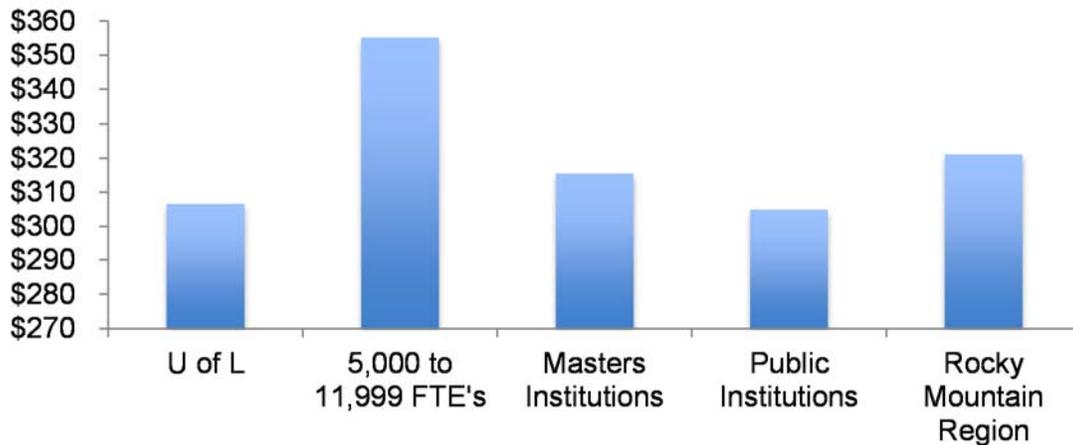
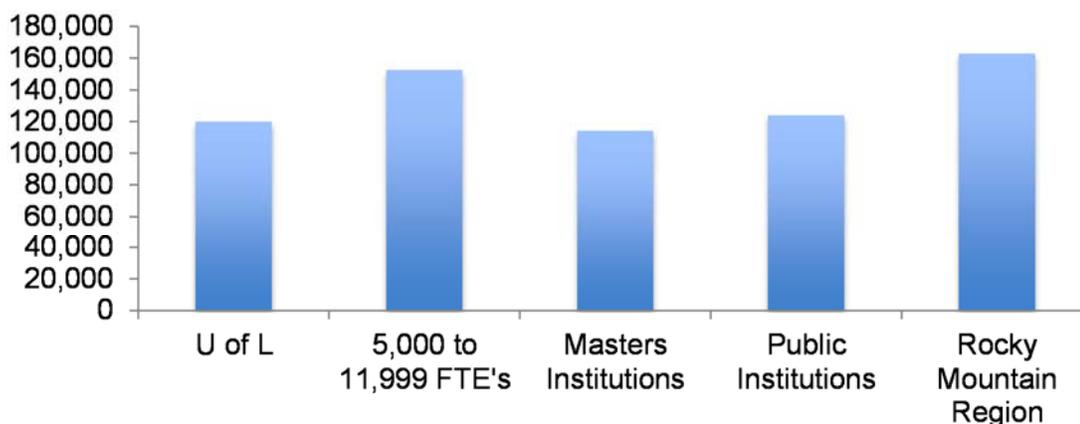


FIGURE 15: ENERGY CONSUMPTION (BTU'S/GSF)



## 4.8 External Influences and Challenges

As the University continually updates its Capital Plan the following influences and challenges continue to be important for the University to address:

- The increase to the Infrastructure Maintenance Program grant, announced in the 2015-16 Provincial budget, will assist the University in maintaining its current infrastructure. However, any reductions in Campus Alberta operating grants will challenge the University's ability to achieve its capital and operating priorities.
- As the University continues to develop as a comprehensive academic and research institution, the number of graduate students has increased, with projections for further increases. Graduate students require increased space in relation to labs and classrooms, which also puts additional strain on the institution in accommodating these needs.
- Renovation costs continue to be significant, especially in the older facilities on campus. The University is experiencing the lack of trades in the marketplace, especially in Lethbridge and Southern Alberta and this adds costs to each project.
- The Provincial Government's goals of accessibility, affordability and quality education and sustainability contained in *Campus Alberta* and *Access to the Future* along with the *Government of Alberta* and *Advanced Education business plans* will continue to influence the University's capital planning process.
- Technology requirements will continue to escalate in the future, making it very difficult for the University to stay abreast of the growing technology needs for the faculty, students, researchers and administration.

## 5 PRIORITY CAPITAL PROJECTS

When prioritizing capital projects, the University of Lethbridge follows the BLIMS category system (Alberta Infrastructure Building and Land Information Management System) by placing capital projects into "Preservation", "Expansion" or "New". The following chart shows the University's priority capital projects for the years 2016-2020.

TABLE 4: PRIORITY CAPITAL PROJECTS

	PROJECTS	New Facilities	Preservation /Renovation	Estimated Project Cost (January 2016 dollars)
1	Destination Project Phase II			
	- Planning	-	10,000,000	10,000,000
	- University Hall Renewal	-	55,000,000	55,000,000
	- Energy/Utility Centre (replacement equipment)	-	20,000,000	20,000,000
	- University Hall Envelope Repairs	-	1,400,000	1,400,000
	- University Hall Window Replacement	-	4,000,000	4,000,000
	- Canadian Centre for Neuroscience (CCBN) Building Renewal	-	15,000,000	15,000,000
	- Visual Art Centre	-	34,300,000	34,300,000
	<i>Destination Project Phase II Total:</i>	-	139,700,000	139,700,000
2	Student Residences - upgrade University Hall residences	-	8,500,000	8,500,000
3	Student Residences - Aperture Park Phase IV	42,400,000	-	42,400,000
		42,400,000	8,500,000	50,900,000
	<b>TOTAL PRIORITY CAPITAL PROJECTS</b>	\$ 42,400,000	\$ 148,200,000	<b>\$ 190,600,000</b>
	<b>Projects in Progress</b>			
1	Destination Project Phase I - Science and Academic Building			280,000,000
2	Student Apartments - Envelope Repairs			13,000,000
	<b>Total Projects in Progress</b>			<b>\$ 293,000,000</b>

Note - Estimated Project Costs are in current dollars (Jan 2016) and will fluctuate depending on construction start dates.

### Top Three Projects:

- (1) Destination Project – Phase II
- (2) Student Residences – upgrade University Hall residences
- (3) Student Residences – Aperture Park Phase IV

## 5.1 Destination Project

This is the highest capital priority of the University of Lethbridge in order to construct up to date science facilities and accommodate the University's strong commitment to research. Alberta Advanced Education's commitment of \$260 million to date is gratefully acknowledged as a significant step towards achieving this priority.

### *Science and Academic Building (Phase I)*

To continue to excel in research and to adapt to the comprehensive institution with more emphasis on graduate student education and providing adequate undergraduate student teaching labs, the University requires new facilities that will provide more dedicated space for these programs and functions. These facilities would increase the capacity for training by providing space for principal investigators, new graduate and undergraduate students, and technical support personnel. The new facility is also essential in order to alleviate health and safety issues that exist as a result of having student residences in the same building as research labs. The new facility includes laboratory and research spaces for the departments of Biological Sciences, Chemistry & Biochemistry, Neuroscience, Psychology, Physics & Astronomy; shared research cores; space for K-12 outreach activities ("Agility" program); student support spaces; and general and specialized classroom spaces. From the outset, the intention of the University has been to develop a facility that dissolves traditional boundaries between departments and creates an environment that enables collaboration and cross fertilization; an environment that enables "Transdisciplinary Teaching and Research".

### *University Hall Renewal (Phase II)*

Most of the departments that will be housed in the new science and academic building are currently housed in University Hall, and moving them to the Destination Project will allow existing space in University Hall to be repurposed to include such things as more informal learning spaces, a Teaching Assistance Centre, a Visual Art Centre (art storage and study space), student support spaces, classrooms and academic programming space, building support services, and administrative space. The repurposed space will also include a First Nations Gathering Centre. One of the Strategic Priorities identified in the University's 2014-19 Strategic Plan is to enhance the experience of First Nations, Métis and Inuit (FNMI) students. One specific action to accomplish this goal is to develop a FNMI social and cultural gathering space. This space will provide students with a place that is welcoming and will support their academic and social needs. The University is committed to increasing the enrollment and retention of FNMI students.

### *Energy/Utility Centre (Phase II)*

This total comprehensive Destination Project will require an updated Energy/Utility Centre. An upgraded Energy/Utility Centre will replace the aging energy infrastructure currently housed in University Hall, and is required to accommodate infrastructure needs in University Hall.

### *University Hall Envelope Repairs and Window Replacement (Phase II)*

In 2013 Crosier Kilgour & Partners completed an assessment of the University Hall building envelope, which identified the need to replace every window frame and insulated glass unit in University Hall. This will also require the appropriate tie-in modifications to be made to properly integrate the new windows with the existing wall systems for the best thermal resistance and air tightness. The report emphasized that this window replacement must be integrated with any renovation/renewal work for University Hall. A restoration contractor is also required to perform remediation work to repair areas and face seal/caulk all precast joints (90% of which have failed) and a penetrating sealer treatment is required to control carbonization of the pre-cast concrete cladding.

### *Canadian Centre for Behavioural Neuroscience (CCBN) Building (Phase II)*

Some of the departments that will be housed in the new science and academic building are currently located in the CCBN building. Moving them to the new facility will allow that space to be repurposed to better meet other academic and research priorities.

### *Visual Art Centre (Phase II)*

The art gallery needs new facilities that would house the entire art collection, allow room for growth, include space for conservation and exhibition preparation, and greatly expand the area for research and study of art works. The current art storage on campus is close to capacity and the main storage building is at the end of its ability to maintain the required environmental standards for storing art works. The current visual study space accommodates only 15 students or visitors and it also serves as art storage, preparation space for exhibitions, work space for conservation, and teaching space for Art History/Museum Studies. As a result, class or community tours are limited to times when gallery work is not being conducted and there is rarely time for individual study.

In combination with the existing art gallery activities and the significant art collection, new facilities would ensure that students, faculty and visitors to campus will have an exceptional opportunity to experience the best of all aspects our art gallery can provide from exhibitions and events, to in-depth study of works of art and lectures or tours connected to works of art in the University's Art Collection.

It is proposed that the needed Visual Art Centre space be relocated into the renovated University Hall.

For more details of the project, refer to the [Destination Project website](#).

The University will begin construction for Phase I of the Destination Project in May 2016.

ESTIMATED PROJECT COST

<b>DESTINATION PROJECT</b>		
<b>PHASE I</b>	<b>Funding Sources:</b>	
	Provincial Government	\$ 260,000,000
	Fundraising / University Sources	\$ 20,000,000
		<u>\$ 280,000,000</u>
<b>PHASE II</b>	Phase II Planning	\$ 10,000,000
	Energy/Utility Centre (replacement equipment)	\$ 20,000,000
	University Hall Renewal	\$ 55,000,000
	University Hall Envelope Repairs	\$ 1,400,000
	University Hall Window Replacement	\$ 4,000,000
	CCBN Renovations	\$ 15,000,000
	Visual Art Centre	\$ 34,300,000
	<i>Destination Project Phase II Total:</i>	<u>\$ 139,700,000</u>
	<b>Proposed Funding Sources:</b>	
	Provincial Government	<u>\$ 139,700,000</u>

## 5.2 Student Residences

The University only has available student residence beds for approximately 13% of its current Lethbridge campus student population. It is a well-known fact that students who live in on-campus residences perform better academically, integrate better into campus life programs and generally have a more positive post-secondary learning experience. The University had set a goal many years ago that it would provide up to 20% of its on-campus student population with residence accommodations.

The University is proposing upgrades to the University Hall residences, as well as further development of the Aperture Park Residence Complex (Phase IV) that will allow for more student residences to be built in accordance with the University Strategic Plan. New residences are required in order to accommodate the anticipated shutdown of the residences in University Hall for at least one year during the renovations to University Hall and the envelope repairs for Piikani and Kainai Apartments. Without new residences the University may not be able offer on-campus residence space at the same capacity as currently exists.

<b>RESIDENCES</b>	Estimated Project Cost
Student Residences - upgrade University Hall residences	\$ 8,500,000
Student Residences - Aperture Park Phase IV	\$ 42,400,000
	<u>\$ 50,900,000</u>
	<b>PROPOSED FUNDING</b>
Financing supported by Housing Rents	<u>\$ 50,900,000</u>

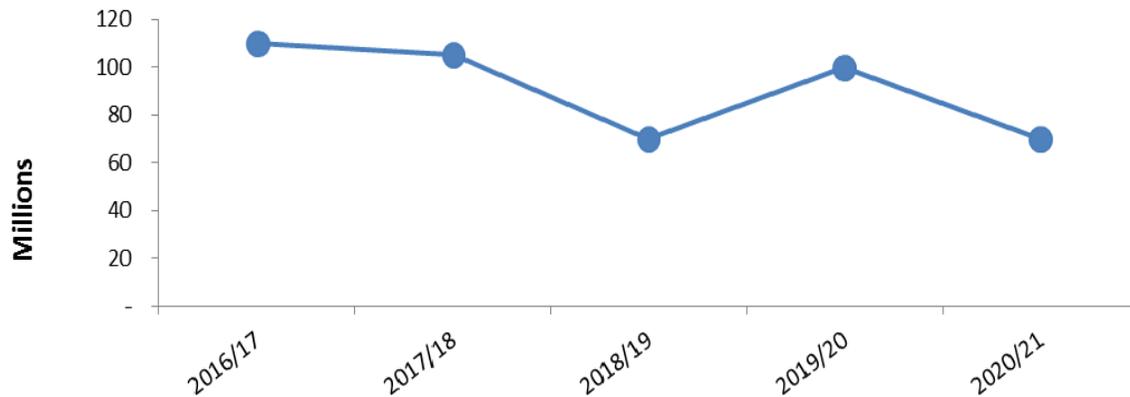
### 5.3 Pre-Design Services

Historically, project design is not undertaken until full funding for the project is in place. However, this approach does not put the University in a position where it is able to take advantage of funding opportunities that may arise from government, partnerships, or philanthropy. It also limits the University's ability to make accurate, fully informed funding requests from government, a challenge that is sometimes encountered when a funding request is accurate when first made, but becomes insufficient when inflationary pressures increase a project's cost while the project pre-design is being completed. Having the pre-design phase for projects completed allows the University to more fully explore diverse partnership and funding opportunities as they arise, ensure that proposed projects are in the best possible alignment with University and government strategic priorities, and encourages projects, if approved for full funding, to be completed on time and on budget. The University would request that government consider providing a predictable, organised approach to providing pre-design funding to post-secondary institutions.

## 6 CAPITAL BUDGET AND FORECAST

Over the next six years the University proposes to significantly expand its facilities. This campus expansion consists primarily of the Destination Project. Figure 17 shows the capital forecast over this time. See Appendix A for more details.

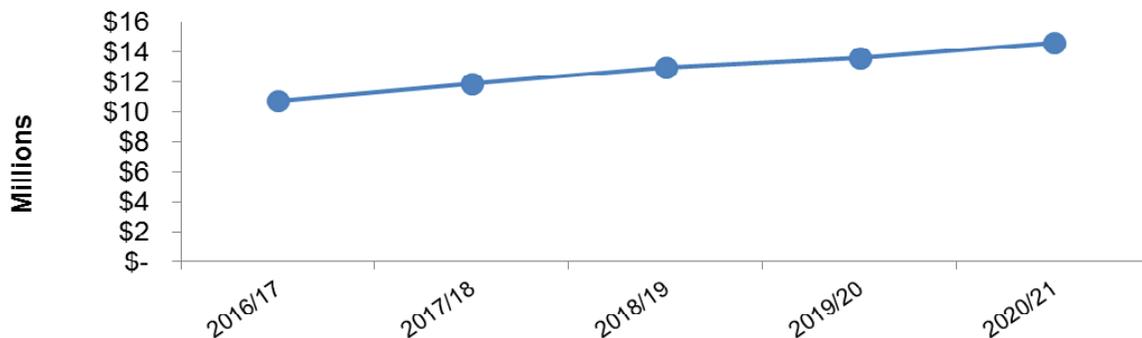
FIGURE 16: FIVE-YEAR CAPITAL FORECAST



As the University continues to expand its capital infrastructure, deferred maintenance remains a concern. The University is grateful to Alberta Infrastructure and Transportation for the one-time deferred maintenance grants received in 2007-08 of \$25.915 million, which has significantly contributed to reducing the total deferred maintenance at the University.

With the new capital infrastructure planned over the next five years, the annual deferred maintenance costs are expected to be approximately \$15 million over the annual current funded levels. See Appendix A for details.

FIGURE 17: DEFERRED MAINTENANCE FORECAST



On a regular basis the University reviews and updates its capital priorities to best correspond to the Government's and its own strategic goals. This is done primarily through the annual BLIMS submission, this Capital Plan and Senior Administration's conversations with government officials and representatives. Informing and working with the Government on emerging trends and needs will continue to be a priority for the University of Lethbridge.

**Appendix A – 5 Year Capital Forecast**  
(January 2016 dollars) (\$000)

	Project Type	Estimated Project Cost	Pre 2016/17	2016/17	2017/18	2018/19	2019/20	2020/21	Total	Start Date	Completion Date
Destination Project Phase I	New Facilities	280,000	16,170	110,000	105,000	48,830	-	-	280,000	Mar 2016	Aug 2019
Destination Project Phase II	Preservation/Renovation	139,700	-	-	-	-	69,850	69,850	139,700	Sep 2019	Aug 2022
		419,700	16,170	110,000	105,000	48,830	69,850	69,850	419,700		
Student Residences - upgrade University Hall residences	Preservation/Renovation	8,500	-	-	-	-	8,500	-	8,500	May 2019	Aug 2020
Student Residences - Aperture Park Phase IV	New Facilities	42,400	-	-	-	21,200	21,200	-	42,400	May 2018	Aug 2020
		50,900	-	-	-	21,200	29,700	-	50,900		
<b>TOTAL CAPITAL PROJECTS</b>		<b>470,600</b>	<b>16,170</b>	<b>110,000</b>	<b>105,000</b>	<b>70,030</b>	<b>99,550</b>	<b>69,850</b>	<b>470,600</b>		
PROPOSED CAPITAL PROJECTS FUNDING											
Provincial Capital Funding (Destination Project Phase I & II)			12,300	110,000	100,000	37,700	69,850	69,850	399,700		
Other Funding Sources			3,870	-	5,000	32,330	29,700	-	70,900		
			16,170	110,000	105,000	70,030	99,550	69,850	470,600		
DEFERRED MAINTENANCE											
Buildings Capital Asset Replacement Value (\$000)		1,060,868		1,077,038	1,187,038	1,292,038	1,362,068	1,461,618			
Annual Deferred Maintenance Requirement (1% of building capital asset value)				10,770	11,870	12,920	13,621	14,616	63,798		
ANNUAL PROVINCIAL CAPITAL REQUIREMENT REQUEST											
New Capital Funding Request				-	-	-	69,850	69,850	139,700		
Annual Deferred Maintenance Request				10,770	11,870	12,920	13,621	14,616	63,798		
<b>TOTAL</b>				<b>10,770</b>	<b>11,870</b>	<b>12,920</b>	<b>83,471</b>	<b>84,466</b>	<b>203,498</b>		

## Appendix B – Capital Maintenance Budget 2016-17

<b>Source of Funds</b>		
	Infrastructure Maintenance Program (IMP) Grant	\$ 2,525,680
	University Hall Safety System Upgrade	\$ 800,000
	University Housing Reserve	6,500,000
	University of Lethbridge Capital Maintenance Program	100,000
	<b>Total Funding</b>	<b>\$ 9,925,680</b>
<b>Proposed Capital Expenditures</b>		
	Student Residences - Envelope repairs	6,500,000
	Art Vault	75,000
	Campus Wide (Interior)	158,680
	Canadian Centre for Behavioural Neuroscience	81,000
	Central Plant	10,000
	Hepler Hall	10,000
	Library	300,000
	Penny Building	90,000
	Site Systems (Circ./Land./Util.)	40,000
	Student's Union Building	172,000
	Turcotte Hall	133,000
	University Centre for the Arts	946,000
	University Hall	1,330,000
	West Castle Biology Field Station	80,000
	<b>Total Proposed Capital Expenditures</b>	<b>\$ 9,925,680</b>

## Appendix C – Capital Budget (\$000)

Capital Budget (in thousands)		2016-17 Proposed Budget	2017-18 Proposed Budget	2018-19 Proposed Budget
<b>SOURCES OF FUNDS</b>				
Major Capital Projects:				
	Provincial Government (Destination Project - Phase I)	125,000	65,000	35,000
	Fund Raising/External Sources	-	-	32,330
	Federal Government	-	-	-
	Research Agencies	-	-	-
	University Contributions	-	5,000	-
		125,000	70,000	67,330
	Infrastructure Maintenance Program (IMP) Grant	2,526	2,526	2,526
	Indirect Research Costs Grant	100	100	100
	University contributions	4,534	2,894	2,924
	University Capital Reserves	6,825	6,800	300
<b>TOTAL FUNDING</b>		<b>\$ 138,985</b>	<b>\$ 82,320</b>	<b>\$ 73,180</b>
<b>CAPITAL EXPENDITURES</b>				
Major Capital Projects:				
	Destination Project Phase I	125,000	70,000	46,130
	* Destination Project Phase II	-	-	-
	* Student Residences - upgrade University Hall residences	-	-	-
	* Student Residences - Aperture Park Phase IV	-	-	21,200
		125,000	70,000	67,330
	Capital Maintenance & Facility Upgrade (includes deferred maintenance)	2,526	2,526	2,526
Equipment				
	Arts and Science	50	50	50
	Arts and Science - MRI	1,500	-	-
	Education	35	35	35
	Management	90	90	90
	Fine Arts	-	-	-
	Health Sciences	-	-	-
	Administrative Support Units	-	-	-
	Sports and Recreation/Athletics	-	-	-
	Motor Vehicles	50	50	50
	Information Technology	1,528	1,528	1,528
	Library	1,131	1,131	1,131
	Facilities	100	100	100
		4,484	2,984	2,984
Ancillaries				
	Parking	325	300	300
	Bookstore	150	-	25
	Printing	-	-	-
	Housing	6,500	6,500	-
	Catering and Food Services	-	-	-
	Conference Services	-	10	15
	Ancillary Services Director	-	-	-
		6,975	6,810	340
<b>TOTAL CAPITAL EXPENDITURES</b>		<b>\$ 138,985</b>	<b>\$ 82,320</b>	<b>\$ 73,180</b>

\*Note – The Board of Governors has not formally approved these major capital projects. They have been submitted to Alberta Advanced Education as the University's capital priorities.

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