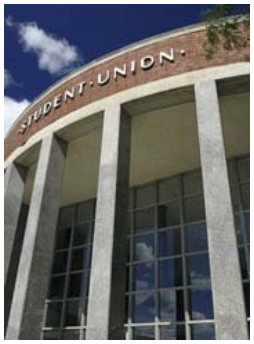
UNIVERSITY OF MASSACHUSETTS

Amherst • Boston • Dartmouth • Lowell • Worcester



Fiscal Year 2011 to 2015
Five-Year Capital Plan Update

September 2010

T10-055

University of Massachusetts
FY2011 to 2015 Capital Plan Update
Executive Summary

The Board of Trustees, the President's Office and campus leadership have identified capital issues as one of the biggest challenges facing the University. Image, reputation, capacity and mission effectiveness require modern and functional facilities.

Over the last decade, an estimated $2.2 billion has been spent on capital improvements. Approximately 84% of this activity has been self-funded from campus operating funds and borrowing. The remaining 16% has been supported by the state.

Despite the significant investment made in the last ten years, the University still faces an enormous challenge to maintain and upgrade its capital assets including its infrastructure, buildings and grounds over the next five to ten years. No single source of funds has the capacity to address the vast capital needs of the University. In order to have a successful capital program, the University must rely on a combination of revenue sources to fund its investment in capital improvements. The four general categories of revenue sources are: state support either through general obligation bond funds or economic stimulus and supplemental legislative appropriations, financing through the University of Massachusetts Building Authority (UMBA), the Massachusetts Health and Educational Facilities Authority (HEFA), or other legally available sources, operating funds and external funding such as private giving and grants.

A number of important developments occurred in 2008 and 2009 that will have a large impact on the overall success of the University's efforts to improve and invest in its infrastructure:

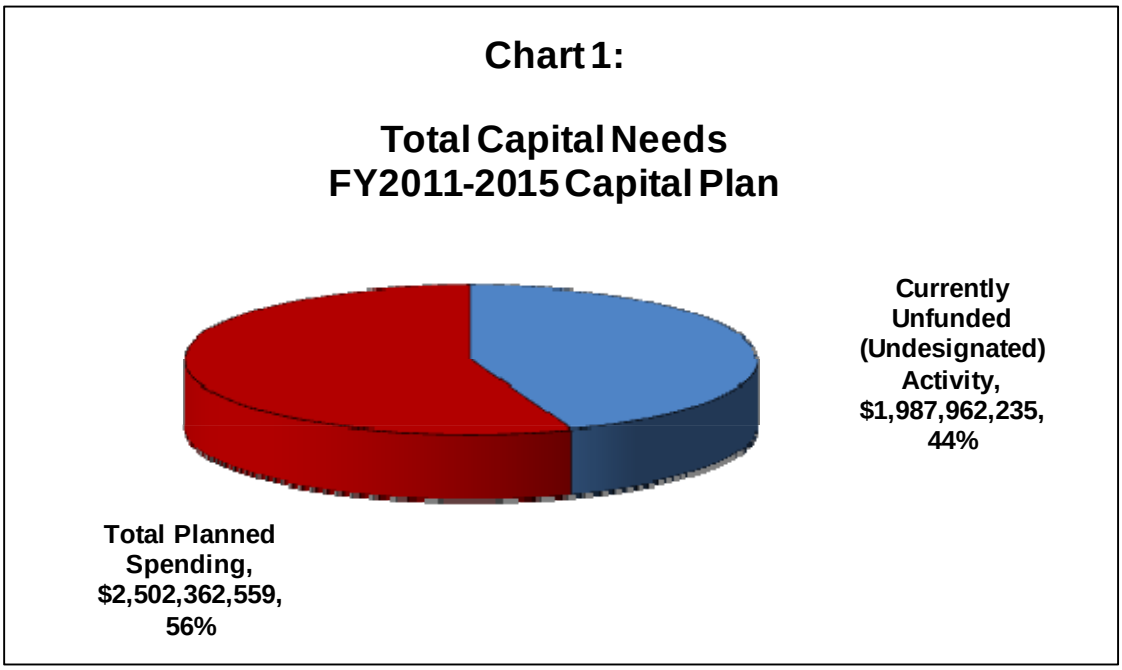
- The Commonwealth passed a $2 billion Higher Education Bond Bill that included over $1 billion for University projects;
- The Commonwealth passed a $1 billion Life Sciences Investment Bill that could provide up to $240 million of capital support to the University.
- The UMASS Building Authority borrowed $380 million in April and June of 2008 to fund critical projects at Amherst, Dartmouth, Lowell and the Medical School.
- The UMASS Building Authority borrowed $550 million in October 2009 to initiate projects at all of the University's campuses.

These important new developments will build on the University's efforts over the past few years to provide new first-class facilities and to address an existing backlog of building repair and renovation projects. With general obligation funds made possible through earlier Higher Education Bond Bills many projects were completed including compliance with a number of environmental, health and safety mandates, as well as other repair and replacement projects.

Maintenance and repair projects represent 43% or more than $1.9 billion of the total needs identified in the plan (and 32% or $794 million of the dedicated funding). The University is committed to maintaining and upgrading our capital assets so degradation of facilities does not hamper the learning and research environment in the future. The University will need to invest a significant amount of its own operating funds in capital projects. The attached plan shows that the University continues to put funding of its capital plan as one of its top priorities.

FY2011 to FY2015 University Capital Needs

The University's capital planning process focuses on a five-year planning period, but incorporates planning assumptions, needs assessments, and funding projections for the next decade. The FY2011 to 2015 period has identified $4.5 billion of capital needs across all campuses and is proposing to spend $2.5 billion over the five years to address these needs (Chart 1).



Capital Plan Summary

The President's Office works closely with the campuses to coordinate and facilitate the capital planning effort. Due to the fact that each campus has its own unique set of capital needs, the capital plans are different from each other reflecting the strategic priorities of each campus. Therefore, the listings of capital projects are presented in priority order for each campus. The campuses have developed ten-year capital spending plans following guidelines from the President's Office. These ten year plans are updated annually with particular attention given to the first five years of the plan. It is the rolling five-year part of the University capital program that is brought to the Board each year for review, reaffirmation and approval. This year the campuses prepared ten-year plans for the period FY2011 to FY2020.

The University's Five Year Capital Plan Update for FY2011 – FY2015 represents an assessment of the capital needs of our campuses based on currently available information. From direct experience, all of the campuses are acutely aware that emergencies can and do disrupt the best of plans. We also know that both the availability and the manner in which funds are made available may affect

campus plans and priorities. Nevertheless, we believe the Capital Plan Update is an accurate assessment, broad enough in scope to accommodate the vagaries of funding as well as emergencies.

The FY2011 to FY2015 five-year plan is summarized in Table 1 below. Additional analysis is attached as are summaries of the reports submitted by each campus.

Table 1:

Source of Funds
University of Massachusetts
Five Year Capital Plan
FY2011-FY2015

	Amherst		Boston		Dartmouth		Lowell		Worcester		Total	
Estimated Funds To be Spent FY2011-FY2015												
University Local Funds	$120,015,000	6%	$4,230,000	1%	$8,770,000	3%	$27,000,000	4%	$118,105,000	14%	$278,120,000	6%
Private Fundraising & Federal Funding	$10,100,000	0%	$7,500,000	1%	$38,500,000	13%	$10,000,000	2%	$5,200,000	1%	$71,300,000	2%
University Borrowing	$378,330,000	19%	$470,164,725	71%	$94,119,000	31%	$168,000,000	27%	$313,000,000	36%	$1,423,613,725	32%
State Capital Support	$202,347,000	10%	$145,279,834	22%	$82,491,000	27%	$156,450,000	25%	$142,761,000	17%	$729,328,834	16%
Currently Unfunded / Undesignated Activity	*$1,320,929,000*	65%	*$39,450,000*	6%	*$82,076,000*	27%	*$260,500,000*	42%	*$285,007,235*	33%	$1,987,962,235	44%
Total Capital Projects	**$2,031,721,000**		**$666,624,559**		**$305,956,000**		**$621,950,000**		**$864,073,235**		**$4,490,324,794**	
Total Not Including Undesignated Funding	***$710,792,000***		***$627,174,559***		***$223,880,000***		***$361,450,000***		***$579,066,000***		***$2,502,362,559***	

As indicated above, the University has supported 84% of its total capital spending over the last decade. As construction begins on major projects being supported by the Higher Education Bond Bill and the Life Sciences Bond Bill, the Commonwealth's support for capital activity at the University will continue to grow. Governor Patrick's Administration has pledged to direct at least 10% of the state's capital spending to higher education. For the next five years, our capital plan anticipates that the state will support approximately 29% of the projected capital activity at the University.

As previously noted, in order to have a successful capital program, the University must rely on a combination of revenue sources to fund its investment in capital improvements. In developing this year's capital plan update, the University has identified $4.5 billion of funding needs. For the remaining projects, we have categorized the funding source as "undesignated." This designation allows the University flexibility to move forward in the planning of projects and to seek out appropriate funding sources and/or take advantage of funding opportunities from external sources should they develop.

The table (Table 2) below displays the shifts in funding sources and total spending projected for the University between the proposed 5-year plan (FY2011-2015) and last year's plan for the FY2010-2014 time period:

Table 2:

Summary of Changes in University Capital Plan
FY2010 and FY2011 Plan Updates

Source of Funds	LAST YEAR'S PLAN Total Planned Spending FY2010-2014		CURRENT PLAN Total Planned Spending FY2011-2015		Variance	
University Local Funds	$297,682,000	8%	$278,120,000	6%	($19,562,000)	-7%
Private Fundraising & Federal Funding	$169,290,000	5%	$71,300,000	2%	($97,990,000)	-137%
University UMBA/HEFA	$1,275,761,725	34%	$1,423,613,725	32%	$147,852,000	10%
State Support	$889,303,468	24%	$729,328,834	16%	($159,974,634)	-22%
Undesignated Funding (Unfunded)	*$1,069,146,000*	*29%*	$1,987,962,235	*44%*	*$918,816,235*	*20%*
Total Capital Needs	**$3,701,183,193**	**100%**	**$4,490,324,794**	**100%**	**$789,141,601**	**21%**
Five-Year Spending Projection	***$2,632,037,193***		***$2,502,362,559***		***($129,674,634)***	***-5%***

The significant shifts in identified funding sources are primarily driven by better knowledge of what the state is committed to funding in the coming five years, a more conservative presentation of anticipated external funding, and a review of the University's borrowing capacity for capital projects.

The proposed plan continues its focus on maintenance, repair and renovation of existing facilities, 43% of the plan is directed toward maintenance and repair projects. Table 3 summarizes the University's capital spending plan for FY2011-2015 by project type:

Table 3:

FY2011-2015 Capital Plan Spending by Project Type	Total Capital Needs		Total Planned Spending	
Deferred Maintenance	$895,328,622	20%	$291,528,559	12%
Building Rehabilitation & Renovation	$903,154,500	20%	$442,898,000	18%
Compliance	$90,273,672	2%	$45,335,000	2%
Planned Replacement	$47,300,000	1%	$13,800,000	1%
Subtotal Maintenance & Repair	**$1,936,056,794**	**43%**	**$793,561,559**	**32%**
New Construction	$2,278,980,000	51%	$1,568,850,000	63%
Information Technology	$25,565,000	1%	$15,565,000	1%
Equipment	$12,600,000	0%	$12,500,000	0%
Other Capital Spending	$237,123,000	5%	$111,886,000	4%
Total Planned Spending	**$4,490,324,794**	**100%**	**$2,502,362,559**	**100%**

In addition to listing projects in priority order and categorizing projects by source of funds, we also organize projects by program type in order to demonstrate the manner in which requested projects in the FY2011-FY2015 update will support the University's mission (Table 4):

Table 4:

FY2011 to 2015 Capital Plan Spending by Program Type	Total Capital Needs		Total Planned Spending	
Basic Infrastructure	$1,667,814,794	37%	$672,786,559	27%
Research	$893,180,000	20%	$545,130,000	22%
Student Life	$625,996,000	14%	$387,651,000	15%
Teaching / Learning	$1,303,334,000	29%	$896,795,000	36%
Total	**$4,490,324,794**	**100%**	**$2,502,362,559**	**100%**

- Basic Infrastructure projects benefit the entire campus and are critical to all operations. Steam lines, power plants, roadways, general public safety improvements such as fire alarm systems and hazardous waste removal systems, and administrative computing are projects that would fall into this category.
- The Research category includes projects such as new research building construction or renovations and improvements to existing research facilities as well as large acquisitions of lab equipment.
- Student Life projects include improvements, renovations or the new construction of student centers, dining halls, recreation facilities, dormitories or other facilities that improve the student experience.
- The Teaching & Learning category includes capital projects such as improvements to or new construction of classroom facilities, auditoria, studios, library facilities and instructional equipment.

State Funding

The five year plan reflects the University's continued efforts to present a full picture of capital needs. Realization of the full plan depends upon a financial situation in which the state provides adequate financial support to the University's capital improvement program in addition to the funds that the University is committed to investing from operating funds, debt financing and external fundraising.

Statutory authorizations, which are approved through capital bond bills, are necessary to allow the Governor to spend state general obligation bond (G.O.) proceeds on University projects. The Executive Office of Administration and Finance (EOAF) and the Division of Capital Asset Management and Maintenance (DCAM) are the state agencies that develop the state's capital plan, file bond bills, approve projects that will receive state funding, allocate state funds to approved projects and in the case of DCAM, design, manage and construct public facilities and improvements. The University works with EOAF and DCAM to identify capital needs to be supported by bond bill authorizations, develop project priorities and funding schedules and to work through the entire project completion process from study to design through construction.

In June of 2006, the Legislature passed chapters 122 and 123, the Economic Stimulus and Supplemental Appropriations bills which included funding for the following UMASS projects which have been included in the University's capital plan. $50 million was transferred to UMBA to support deferred maintenance projects, $4 million was spent on creating the Venture Development Center at

the Boston Campus, $35 million has been pledged to support the construction of the Emerging Technology and Innovation Center at the Lowell Campus, and $15 million might be made available for a Biomanufacturing Facility for the Dartmouth Campus.

In May of 2007 the University submitted an $840 million higher education bond bill request to the administration and the legislature. The request reflected master planning and facilities condition reviews that were underway at each of our campuses. Later that year, Governor Patrick filed his Life Science Initiative and the Higher Education Bond Bill that incorporated the University's capital priorities. Both bills were passed into law and serve as funding sources for a group of significant projects underway across the University. The following two sections summarize the impact of the two new laws on UMASS.

Chapter 258 of 2008 – The Higher Education Capital Improvement Act

The Higher Education Capital Improvement Act (the Higher Education Bond Bill) authorizes more than $1 billion of funds toward projects exclusive to UMass. Of the funds dedicated to the University, 63% or $628,682,500 is earmarked for specific projects. The remaining 37% or $372,817,500 is currently undesignated for specific projects (Table 5). This level of undesignated funding leaves flexibility sufficient to meet emergency needs should they arise as well as the time necessary to fairly evaluate the on-going strategic investment needs of the University. DCAM has recognized the importance of the higher education investment program and has reorganized itself accordingly. DCAM has assigned a project manager to each of our campuses and is moving forward on many of the projects earmarked in the bond bill.

Chapter 130 of 2008 – The Life Sciences Industry Investment Act

The new law is designed to enhance the state's strengths in the fields of medicine and science and fill gaps in federal funding to ensure the state's ability to support life sciences innovations from idea to product. In addition to capital funding, the $1 billion Life Sciences Initiative provides a number of opportunities for the University to participate in the planning and program implementation of this important economic development effort.

The package includes:

- $500 million in Capital Funding to be spent over a 10 year period; $299.5 million for targeted infrastructure projects and the balance - $200 million in unrestricted funds for investment in public infrastructure projects, at the discretion of the Massachusetts Life Sciences Center (MLSC). $241 million of the designated projects are directed toward UMASS campus facilities and programs.
- $25 million each year for 10 years for the MA Life Sciences Investment Fund, held at the MLSC, for loans, grants, fellowships, and investments to stimulate increased research and development in the life sciences sector.
- $25 million each year for 10 years in tax incentives to be awarded to certified life sciences projects.

Table 6 lists the full set of University projects that are indentified for state capital support through the initiative.

Table 5:
Chapter 258 of 2008 The Higher Education Capital Improvement Act

Earmarked (designated) UMASS Projects	Project Cost
Amherst campus	
New academic classroom building	$85,000,000
New laboratory science building	$100,000,000
Repairs to Machmer Hall	$12,600,000
Repairs and renovations to Lederle Research Center	$41,250,000
Repairs and renovations to Morrill Science Center	$51,300,000
subtotal Amherst	**$290,150,000**
Boston campus	
Stabilization of the campus substructure & alternate parking improvements	$25,000,000
Construction of a new academic building	$100,000,000
subtotal Boston	**$125,000,000**
Dartmouth campus	
Renovations and infrastructure repairs to the library	$8,000,000
Building and retrofitting of vacated spaces	$11,000,000
Planning and design of dormitories	$250,000
Classroom space upgrades	$6,000,000
Air conditioning improvements to facilities	$2,100,000
Major infrastructure repair projects, construction of Charlton College of Business and construction of a Marine science facility at SMCT	$70,000,000
Portuguese American Archives	$1,000,000
Center for Portuguese Studies	$500,000
subtotal Dartmouth	**$98,850,000**
Lowell campus	
New south academic building	$26,000,000
North quad modernization	$10,000,000
MA Medical Device Development Center (M2D2)	$4,000,000
Deferred maintenance	$5,000,000
Civic and Athletic Facilities	$10,000,000
Storm water management	$1,500,000
Renovations to Olney Hall	$2,500,000
subtotal Lowell	**$59,000,000**
Worcester campus	
Repairs, renovations, and improvements to buildings, systems and other facilities	$43,500,000
Improvements to the Medical School's Shriver Center facility in Waltham	$8,500,000
Expansion of the Medical School	$3,682,500
subtotal Worcester	**$55,682,500**
Total Amount of Earmarked Projects	**$628,682,500**
Total Undesignated	**$372,817,500**
TOTAL UMASS FUNDING	**$1,001,500,000**

Table 6:

Chapter 130 of 2008 The Life Science Industry Investment Act

Earmarked (designated) UMASS Projects	Project Cost
An Advanced Therapeutics Cluster (the "Albie Sherman Center"), Worcester	$90,000,000
Life Sciences Research Center Complex, Amherst	$95,000,000
Emerging Technology Innovation Center, Lowell	$10,000,000
Grant to acquire the ATMC facility, Dartmouth	$11,400,000
Marine Biological Lab at Woods Hole, Dartmouth	$10,000,000
Center for Personalized Cancer Therapy, Dana-Farber Harvard Cancer Center, Boston	$10,000,000
Appropriation for Pioneer Valley Life Sciences Initiative lease, Amherst	$5,500,000
New Bedford Life Sciences Incubator, Dartmouth	$5,000,000
Taunton Life Sciences Incubator, Dartmouth	$5,000,000
Total UMASS Earmarks	**$241,900,000**
TOTAL LIFE SCIENCES CAPITAL PROGRAM	**$500,000,000**

State Support in FY2011 - 2015

The University has been working closely with EOAF as it develops the state's FY11-15 capital spending plan. The plan lays out state capital investment for the next five years, including investments the University can expect via the Higher Education Bond Bill. While the economic downturn temporarily delayed the full initiation of the University's bond bill projects, construction is either underway or ready to commence on critical buildings across the University system. EOAF remains committed to spending the full bond authorization in a ten-year period and this prioritization of higher education has been reflected in the Administration's planning documents.

New Collaborations

The University, along with the Massachusetts Institute of Technology, Boston University, Harvard University, and Northeastern University, is organizing a regional consortium of academic and research institutions to develop a high-performance computing facility to be located in Holyoke, MA. The consortium is working closely with the state and industry leaders with a significant presence in Massachusetts, including EMC and Cisco Systems. The facility will provide scientific computing support to researchers, catalyze collaborations in research fields requiring significant computational resources (such as climate change prediction and system-level modeling for immune response to disease), support workforce training and science education, improve management of enterprise computing systems and spur regional economic development. The benefits to UMass are significant. Faculty on all campuses will have access to unprecedented levels of computational resources for research and the opportunity to participate in joint research. The campuses and the system office will have a more robust and efficient information technology infrastructure, and the University overall will have an

enhanced position through its leadership in research and education. Locating the facility in Holyoke will provide environmental benefits, reduce capital and operating costs, and present regional economic development opportunities.

University Borrowing

The capital plan proposes using $1.42 billion in funds borrowed by the University through the UMASS Building Authority (UMBA) or other financing agencies such as the Massachusetts Health and Education Facilities Authority (HEFA). The University is responsible for servicing the debt on these bonds.

It is important to note that the University has approximately $643 million of funds currently borrowed for the projects identified on the capital plan leaving approximately $780 million to be borrowed during the five-year planning period. Accordingly, UMBA is currently gearing up for a bond issuance targeted for late October. This bond issue will allow the University to take advantage of historically low interest rates and a federally-subsidized rate reduction related to Build America Bonds.

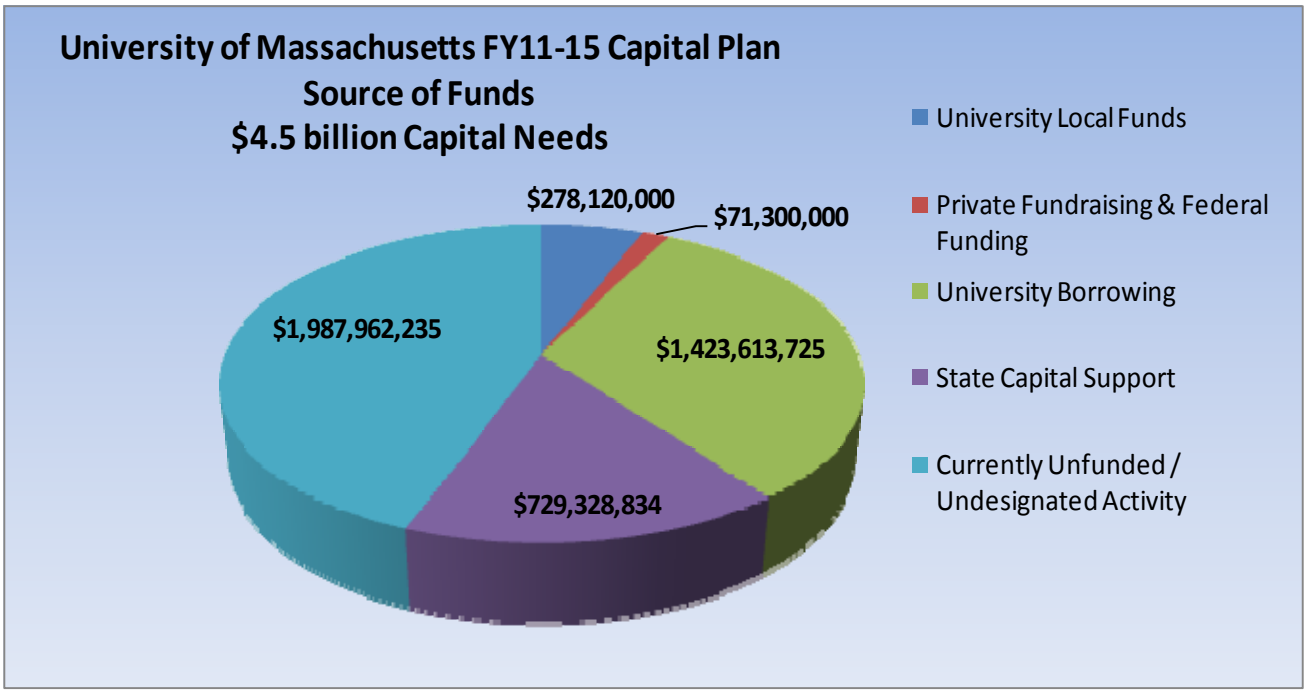
What the Board is being asked to approve

The trustees are being asked to approve the University's capital plan detailing our capital funding needs for the five year period FY2011 to 2015. This will include:

1. any new construction project over $1,000,000 as required by University policy (detailed in Appendix A) and,

2. any update in total project cost for individual projects that are estimated to have increased by 20% or more over amounts previously approved by the Trustees (detailed in Appendix B).

The following pages provide greater detail and analysis on the University's capital plan including summaries of campus capital plans and a full listing of capital projects.


University of Massachusetts FY11-15 Capital Plan
Source of Funds
$4.5 billion Capital Needs
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University Local Funds
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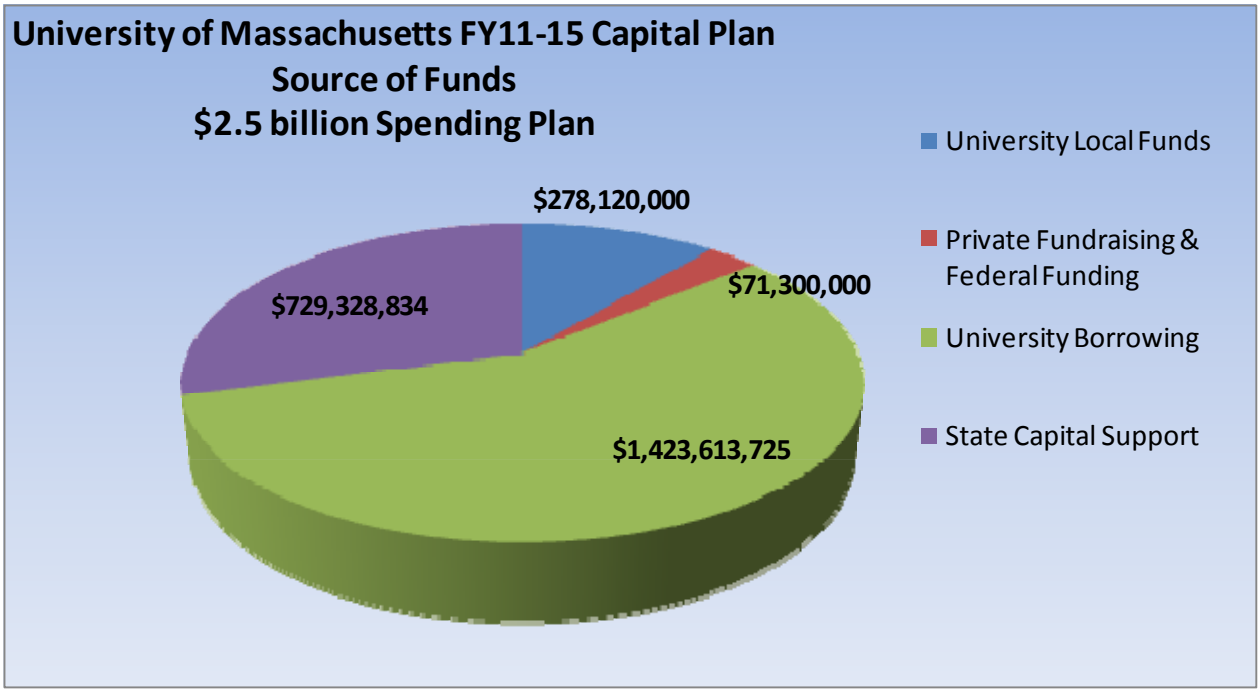
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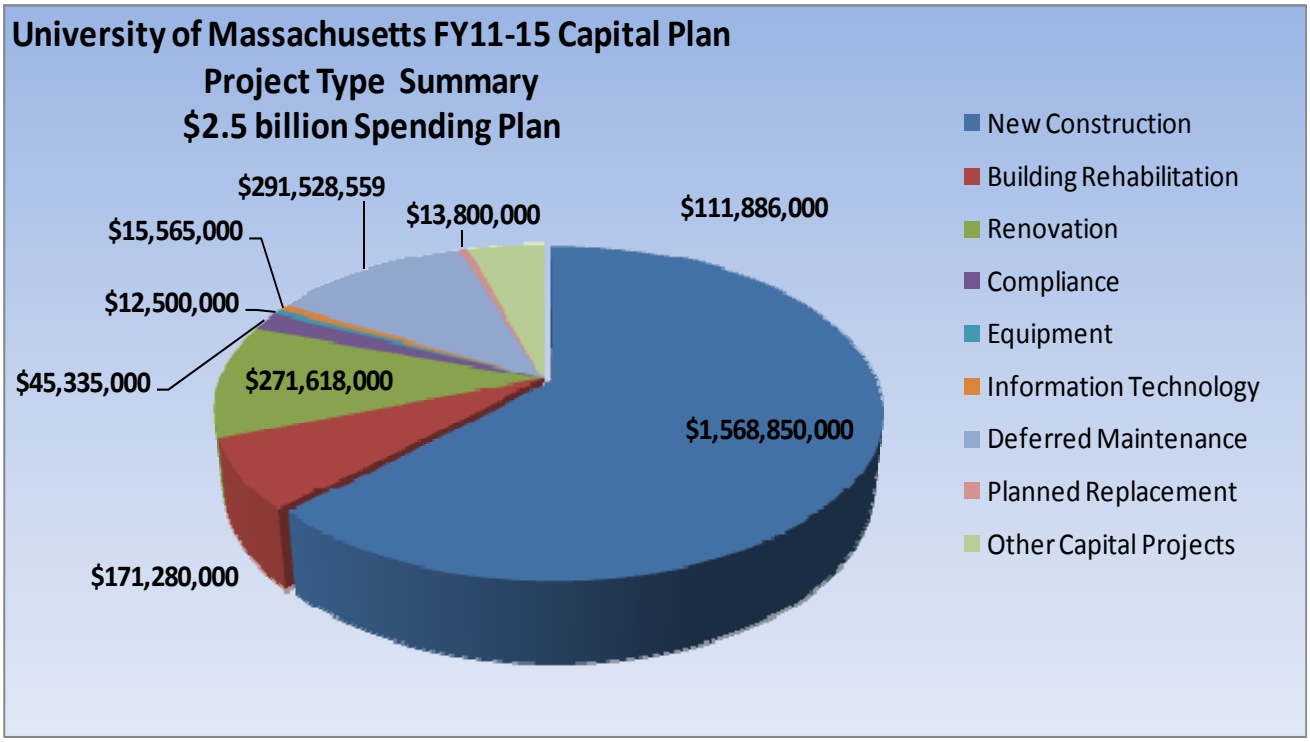
University of Massachusetts FY11-15 Capital Plan
Project Type Summary
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$12,500,000
$45,335,000
$271,618,000
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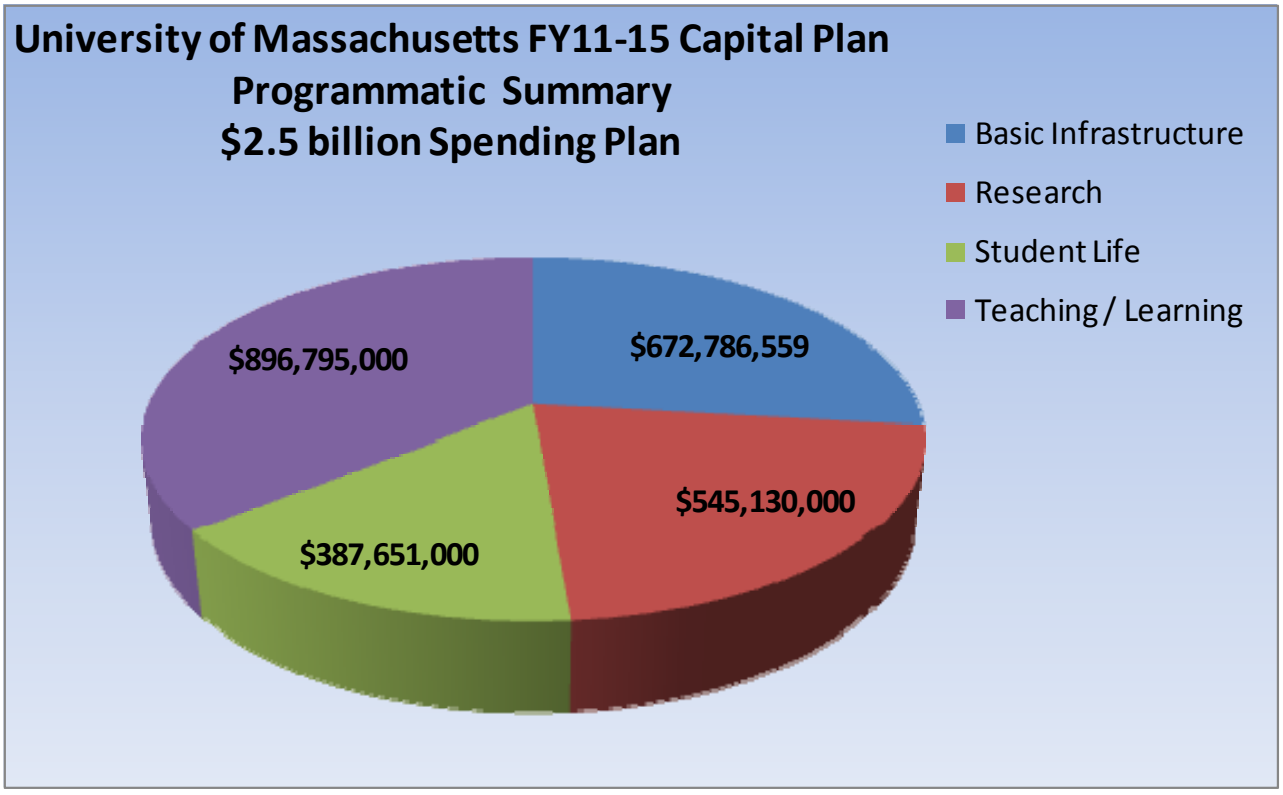
$171,280,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


University of Massachusetts FY11-15 Capital Plan
Programmatic Summary
$2.5 billion Spending Plan
$896,795,000
$672,786,559
$545,130,000
$387,651,000
Basic Infrastructure
Research
Student Life
Teaching / Learning

CAPITAL PLAN UPDATE
FY2011-2015
UNIVERSITY OF MASSACHUSETTS - AMHERST

The Amherst campus capital plan is focused on a five-year planning timeframe from FY11 through FY15. This capital plan submission is organized to identify funded projects with designated funding sources (table 1a) as well as capital project priorities that are not yet funded (table 1b). The funded project list includes projects that are currently underway or that are planned to begin in the next year. The project list with undesignated funding sources includes projects that have been identified as current needs as well as projects that respond to our long range goals.

The Amherst campus maintains an updated comprehensive database of facilities condition and space utilization information for the campus built environment. The campus has also completed comprehensive studies of science, engineering, classroom and academic space utilization and needs. This facilities data provides important detailed information that guides our capital planning process and on-going physical development of the campus. We are committed to providing new and modernized facilities to meet the demands of an increasingly competitive market in higher education. It also recognizes that our deferred maintenance backlog and growing inventory of obsolete space must be addressed to remain competitive as a leading public research university.

As the University's "flagship" institution, the Amherst campus has established a goal to become one of the best public universities in the country. The Chancellor's "Framework for Excellence" published in spring 2009 outlines a ten year strategy to attain this goal. Primary among the challenges is the need to maintain a strong, nationally competitive faculty in order to maintain top quality instructional and research programs that will in turn attract and retain top quality students. This requires the ability to attract new and retain existing faculty that are nationally and internationally recognized in their fields. The Amherst capital plan is structured with priorities that support the strategic challenges and campus goals of improving teaching, increasing research, enhancing student life and recruiting/retaining quality students and faculty. The underlying strategy of our plan is to balance capital investments between all of our facility needs required to support the goals and strategic priorities of the campus and the University. Thus, the priorities within the capital plan are balanced between new construction, facilities modernization and sustaining existing facilities through the reduction of deferred maintenance.

In order to make continual progress on our facilities improvement and development goals, the campus will need to continue to pursue an aggressive funding strategy to complete high priority capital projects. The Amherst campus continues to rely heavily on allocations from the campus operating budget, including borrowing through the UMBA, to fund capital projects. The campus has committed $79M of campus operating funds to service debt and support the implementation of our capital plan. This plan anticipates additional borrowing through the UMBA within the next five years.

The current capital plan includes significant State funding from the Higher Education Bond Bill and the Life Science Initiative to address several important capital projects including new construction and much needed renovations. The State has committed $100M to the construction of one of our highest priority, the New Laboratory Science Building which is a key component in supporting the campus goal to increase research

and recruit top faculty. However, on-going fiscal constraints at the State level have delayed the release of State capital for other important campus projects. The campus continues to lobby the State to release funding for our next highest priority, the new academic classroom building, which is critical in supporting our enrollment growth. The delay in releasing funds for several renovation projects and the uncertainty of the funding for the Life Science Building requires the campus to adjust our capital planning efforts accordingly.

In order to sustain and build upon our current progress, the campus recognizes the need to seek additional funding from other sources including private donations and Federal grants. In the past, private donations supported construction of the addition to the Isenberg School of Management and renovations to the Campus Center for the Hotel and Travel Management program. The campus continues to pursue private donations for new construction. The campus was successful in obtaining over $2M in private fundraising and $5M in Federal grants to support the construction of the new Integrated Sciences Building. We have obtained a $2M federal grant to be used for construction of the New Laboratory Science Building. The campus obtained a $7M grant from the NIH for renovations to the Lederle Graduate Research Center to support research. The College of Natural Sciences has raised nearly $2M for laboratory renovations for the Health and Wellness Center in the Food Science Department. We have raised $1.4M to support the construction of a new building for the marching band. The Isenberg School of Management has received $1M in private donations and is targeting an additional $13M to support the construction of new classrooms for their academic programs. The campus is also seeking external funds through grants and private donations for fit-out of the shell space in the new science building. Successful fundraising to support our capital needs remains a high priority.

FY10-11 Current Projects:

The campus has completed or is nearing completion of several major new projects that will provide modern facilities to support our teaching and research mission. Many more projects are underway and many of the previously funded major projects are in the construction phase. At the completion of FY10, capital expenditures in the past three years at the Amherst campus topped $395M with over $105M expended in FY10. The priorities in the current plan are highlighted below.

1. **Reduction of deferred maintenance/code compliance:** In the past year the campus completed over $30M of important deferred maintenance and code compliance projects with several other projects underway. With the assistance of Sightlines, the campus maintains a comprehensive database of critical facility repair needs that guides the prioritization of capital projects. This data also allows the campus to track progress in reducing our deferred maintenance liability. The campus has successfully reduced the growth of deferred maintenance through our capital expenditures on building repairs over the last three years. However, the campus must continue to address deferred maintenance and this year's capital plan reflects deferred maintenance reduction as one of our highest priorities.
2. **Central Heating Plant:** The new Central Heating Plant has been operational for two years. We have continued with the commissioning and shake-out of the major system components and this past year and obtained the operating permit from the Department of Environmental Protection.

3. **New Construction:** The campus took occupancy of the new **Recreation Center Building** in the Fall 2009. Student use of this new facility has steadily grown in the first year of operation. As planned, the new facility has enhanced the student life experience on campus by providing quality space for recreation and social interaction. Construction of the new **Police Facility** is on schedule for completion n January 2011. The new **Marching Band facility** is in construction and on schedule for completion in the spring 2011. Construction on the **New Laboratory Science Building** began in March 2010 and is on schedule for completion in the fall 2012. This new science facility will provide state-of-the-art research laboratories for the life sciences. The campus is starting the certifiable study for the new **academic/classroom building** that will provide state-of-the-art instructional and other academic department space.
4. **Renovations/Modernization:** In the past year, the campus initiated construction on several renovation/modernization projects to support new faculty hires in Chenoweth, Morrill and Hasbrouck for the departments of Food Science, Biology and Physics. Major modernization projects in the Dubois Library, Fine Arts Center and Stockbridge Hall have progressed through construction as well. The campus initiated design for major renovations in the Lederle Graduate Research Tower and Goessman Laboratory to modernize laboratories for teaching and research. The campus has an on-going need to upgrade existing science facilities as well as additional new laboratory space to support teaching and research. We are proceeding with several other important renovations to support new and replacement faculty hires and research activities in various academic programs.
5. **Energy Performance Improvements:** With the completion of several projects aimed at improving energy performance in facilities on the Amherst campus, the campus has experienced a remarkable return on our investment. Since 2004, the campus has reduced steam consumption by 24%, water consumption by 45% and electrical consumption by 12%. With these energy efficiency measures and the completion of the new Central Heating Plant the campus has reduced its carbon footprint by 30% over the past five years. We are continuing with our current strategy to achieve significant energy performance improvements in the next five years. The campus is nearing completion of the $10M North Campus Infrastructure Improvements, a project that replaces major steam, water and electric infrastructure. This project will reduce energy costs and provide reliability to the infrastructure that supports major research programs in the Lederle Graduate Research Center, Conte Polymer Center and other buildings located in the north campus area. Through energy savings, these projects and others will generate the capital to finance the cost of the improvements.
6. **Campus Master Plan Update:** In recent years, the Amherst campus has developed an understanding of our challenges, opportunities and facility needs through the studies that assessed our science/engineering and academic/classroom needs. In the past year, the campus working with DCAM selected the consultant team of Wilson Architects and Ayer Saint Gross to update the campus master plan. The consultant team has completed the first phase of the update that identifies key issues and planning principles that will guide the development of the overall plan. When completed, this updated master plan will guide the future development of the campus and reinforces the 2009 Framework for Excellence drafted by Chancellor Holub. The goals of the updated master plan will include:
    - Addressing the programmatic needs of the Amherst campus
    - Providing up-to-date facilities
    - Integrating a large campus with overlapping neighborhoods
    - Strengthening campus open spaces

- Improving campus connections
- Creating a compact, vibrant and sustainable campus

The capital projects included in this plan reflect the strategic goals and priorities of the campus. The Amherst campus has several important goals as we look to the future. They include increasing the number of faculty and students as well as research grants. Projects in the capital plan support these goals in several ways.

Teaching and Learning: The plan includes two pilot projects to construct new team based learning classrooms in our existing facilities. These new classrooms will be designed to support group interactive learning and serve as a model for the development of future classrooms on campus. The planned new academic/classroom building will provide a mix of state-of-the-art classrooms and academic space to improve our inventory of campus teaching and learning space. These new facilities will help in retaining and recruiting quality faculty and will support student recruitment to achieve our enrollment goals.

Research: The plan includes new animal care facilities, modern greenhouse facilities and quality research space in the new laboratory science building currently in construction. These premier projects as well as several renovations included in the plan will support current and enable development of new research initiatives. These projects provide modern research space that is essential to achieve our goals for recruiting new faculty and increasing research grant funds.

Campus Life: The opening of the new Recreation Center in the fall 2009 provides quality space for student recreation to support individual and group exercise programs, social interaction and general recreation. A new facility for the Minuteman Marching Band will provide adequate space for the band program. The campus is proceeding with the design of a new project to add 1,500 beds to the campus. This project will provide additional housing to accommodate current demand as well as enrollment growth. In addition, planned renovations in the residence halls will improve the student housing experience and improvements to the southwest exterior concourse will provide improved accessibility, rain gardens with integrated seating areas and improved site lighting for the students residing in the Southwest Dorms.

The Amherst campus is committed to protect its investment in new facilities as they are constructed. Plans are in place to set aside 1.5% of the construction cost when we construct new facilities for long term maintenance needs. This represents our on-going strategy to provide funding for facility renewal over the life cycle of the facility and prevents the deferral of required maintenance. In addition, we budget 3.5% of the project cost for operational and routine maintenance expenses for new facilities. These budget amounts are consistent with industry standards in facility management aimed at providing the appropriate stewardship of our new facility assets.

The FY11-15 capital plan represents a continued major investment in the future of the Amherst campus. It reflects the established goals of the campus and strategic priorities of the University through a balanced investment program that addresses critical repairs, maintains health and safety standards, provides new and modern teaching and research facilities and improves student life.

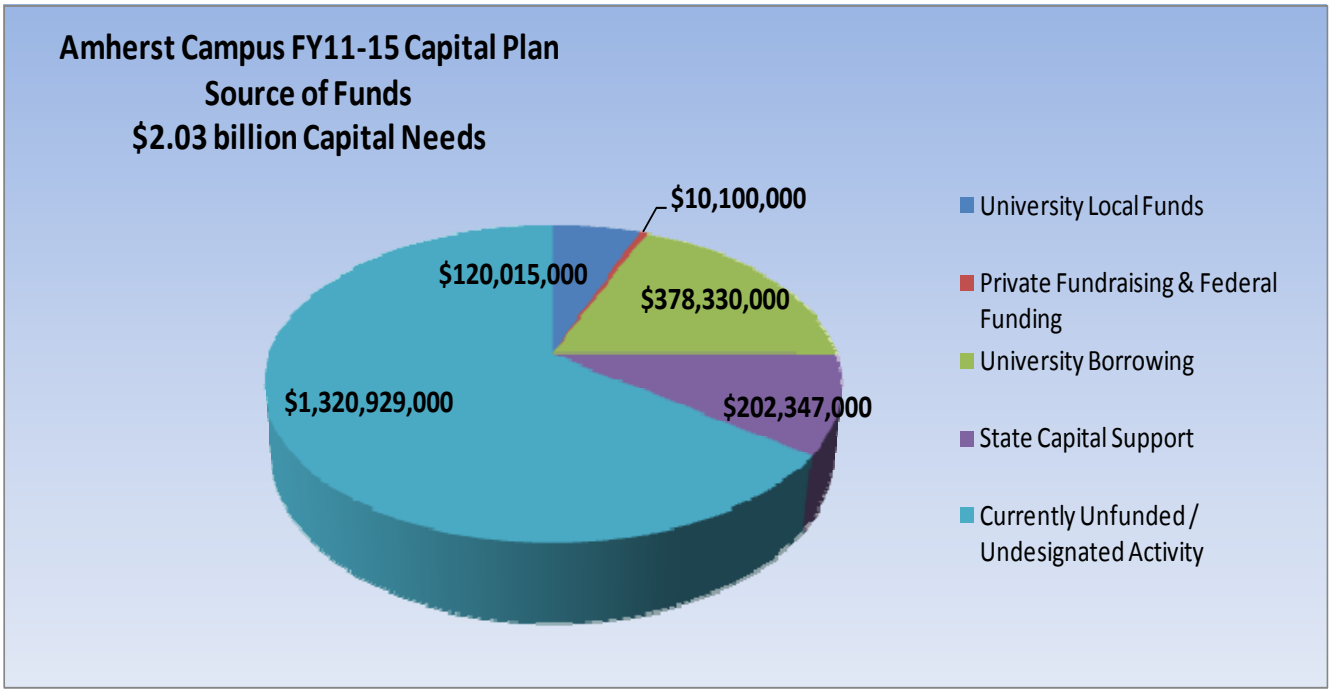
University of Massachusetts FY11 Capital Plan Update
Amherst Campus Projects

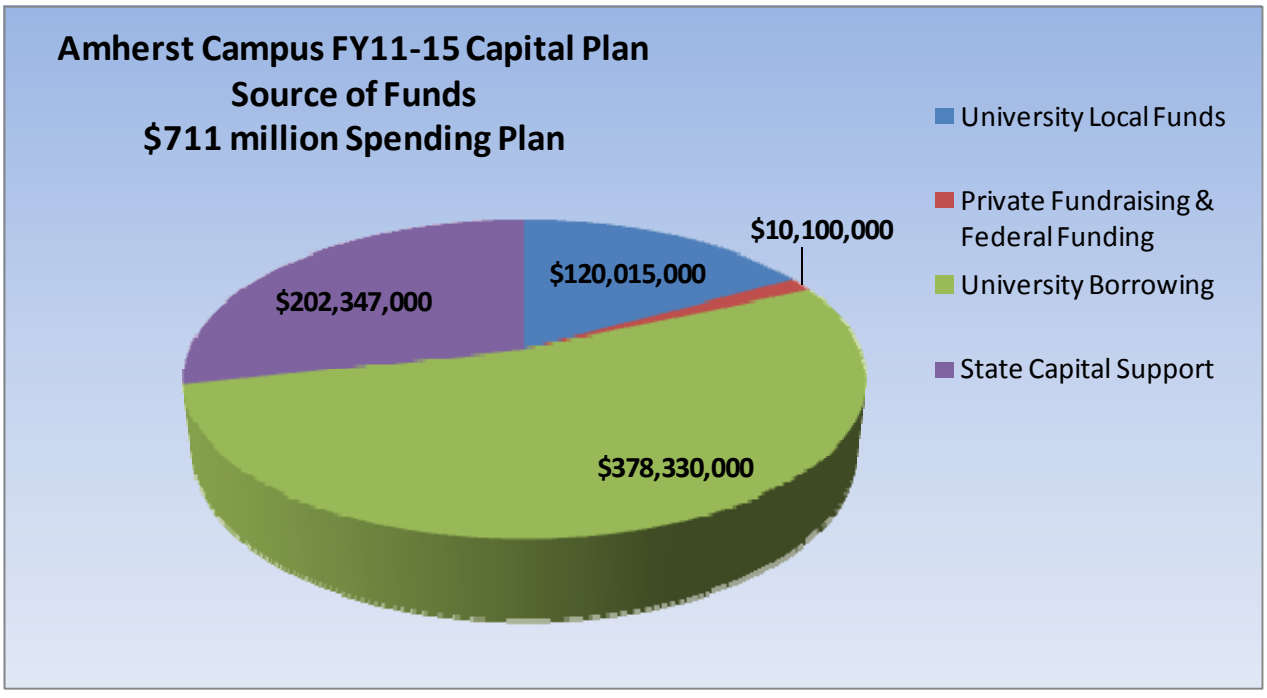
Campus Priority	Campus Project Names	Project Type	Program Type	Total Project Cost Est. August 2010	Five Year Spending Anticipated FY11-15 Cash Flow
	Designated Projects				
1	Housing Expansion	NC	SL	$190,000,000	$190,000,000
2	ADA Accessibility	CO	BI	$2,000,000	$2,000,000
3	Academic Renovations Pool	RV	TL	$2,500,000	$2,500,000
4	Campus Space Reallocation	RV	BI	$5,000,000	$5,000,000
5	DuBois Library Interior Repairs	DM	TL	$13,000,000	$800,000
6	DuBois Library Deck Replacement	RV	BI	$6,650,000	$46,000
7	Information Technology Project (Peoplesoft)	IT	BI	$1,000,000	$1,000,000
8	OIT/Telecom Projects	IT	BI	$1,000,000	$1,000,000
9	Housing Repair & Renovation	RV	SL	$22,500,000	$22,500,000
10	Parking Repair and Renovation	DM	BI	$2,750,000	$2,750,000
11	Classroom Renovations	RV	TL	$2,000,000	$2,000,000
12	Fine Arts Center Piping Replacement	DM	BI	$7,100,000	$3,300,000
13	Police Facility	NC	BI	$12,500,000	$7,500,000
14	University Apartments Demolition	DM	BI	$2,200,000	$321,000
15	UMBA Program Contingency	NC	BI	$3,300,000	$3,300,000
16	Dubois Library Elevator Replacement	DM	BI	$6,500,000	$4,650,000
17	Dubois Library Electrical and Plumbing Replacement	DM	BI	$7,000,000	$6,500,000
18	Campus Center Electrical Repairs	PR	BI	$6,000,000	$3,900,000
19	GRC basic systems upgrades	DM	BI	$10,305,000	$6,400,000
20	French Greenhouse replacement Phase I (Bowditch)	PR	TL	$10,800,000	$9,900,000
21	Housing Sprinkler Systems	CO	BI	$32,000,000	$14,000,000
22	Goodell Fire Suppression System	CO	BI	$2,000,000	$525,000
23	Lederle GRC electrical upgrade	DM	R	$4,148,000	$1,700,000
24	Stockbridge Hall, Fire Suppression and Fire Alarms	CO	TL	$2,120,000	$1,690,000
25	Morrill complex repairs and renovations	DM	BI	$9,081,000	$8,000,000
26	New Laboratory Science Building	NC	R	$156,500,000	$153,000,000
27	Academic Classroom Building	NC	TL	$85,000,000	$84,500,000
28	Machmer Repairs	DM	TL	$12,600,000	$0
29	Lederle GRC Repairs and Renovations	BR	R	$41,250,000	$11,000,000
30	Morrill Science Center Renovations	RV	R	$51,300,000	$13,300,000
31	Goessmann Renovations	RV	R	$15,000,000	$12,000,000
32	Southwest Concourse and Infrastructure Replacement	DM	BI	$14,000,000	$8,300,000
33	Renovate Morrill Library	RV	TL	$3,500,000	$500,000
34	Morrill IV HVAC	DM	BI	$5,000,000	$350,000
35	Band Building	NC	BI	$5,800,000	$4,800,000
36	Hampden Dining/Student Union Study	RV	SL	$400,000	$400,000
37	Chenoweth new faculty renovations	RV	TL	$1,961,000	$165,000
38	Hasbrouck new faculty renovations	RV	TL	$2,133,000	$700,000
39	Herter Roof Replacement	DM	BI	$800,000	$330,000
40	Life Sciences Facility	NC	R	$95,000,000	$5,000,000
41	LGRC Elevator Replacement	DM	BI	$2,300,000	$830,000
42	Morrill II & III new faculty renovations	RV	TL	$2,686,500	$1,900,000
43	North Infrastructure Improvements	DM	BI	$10,000,000	$3,130,000
44	New Faculty Hire Renovations	RV	R	$3,000,000	$2,000,000
45	Electrical/other infrastructure	RV	BI	$5,000,000	$5,000,000
46	Campus Master Plan Update	O	BI	$2,000,000	$250,000
47	Chenoweth Food Science Lab Renovations & MEP	RV	R	$3,300,000	$2,900,000
48	Fine Arts Center MEP and renovations	DM	BI	$4,550,000	$2,000,000
49	Roof Repairs	DM	BI	$2,000,000	$2,000,000
50	Totman Physical Education Building MEP	DM	BI	$875,000	$775,000
51	New Africa House Elevator, MEP and renovations	DM	BI	$3,300,000	$515,000
52	Paige Lab Renovations	RV	BI	$6,000,000	$6,000,000
53	Fine Arts Center fire protection and emergency generator	DM	BI	$4,250,000	$4,250,000
54	Hasbrouck Laboratory Renovations and Repairs	DM	BI	$3,920,000	$1,640,000
55	Marks Meadow Renovations	DM	BI	$10,000,000	$9,110,000
56	Morrill I Vivarium & relocation of Western MA public health [formerly separate]	RV	R	$9,500,000	$8,500,000
57	Marcus Upgrade and Relocate Electrical Power	BR	R	$1,400,000	$1,130,000
58	LGRC Faculty Renovations (NIH)	BR	R	$11,761,000	$11,200,000
59	Renovate Dickinson Hall	RV	TL	$5,000,000	$5,000,000
60	Worcester Dining Commons Renovations	RV	SL	$20,000,000	$20,000,000
61	ISOM architectural and MEP	DM	BI	$2,000,000	$2,000,000
62	Fearing Street property acquisition	O	BI	$535,000	$535,000
63	Two megawatt steam turbine	NC	BI	$3,200,000	$3,100,000
64	Hills relocations	RV	TL	$4,000,000	$4,000,000
65	Team Learning Classrooms	RV	TL	$1,500,000	$1,500,000
66	Facility Demolitions	O	BI	$10,900,000	$10,900,000
67	Franklin Dining Commons structural and MEP	RV	BI	$5,000,000	$5,000,000
	Total Designated Projects			***$991,675,500***	***$710,792,000***

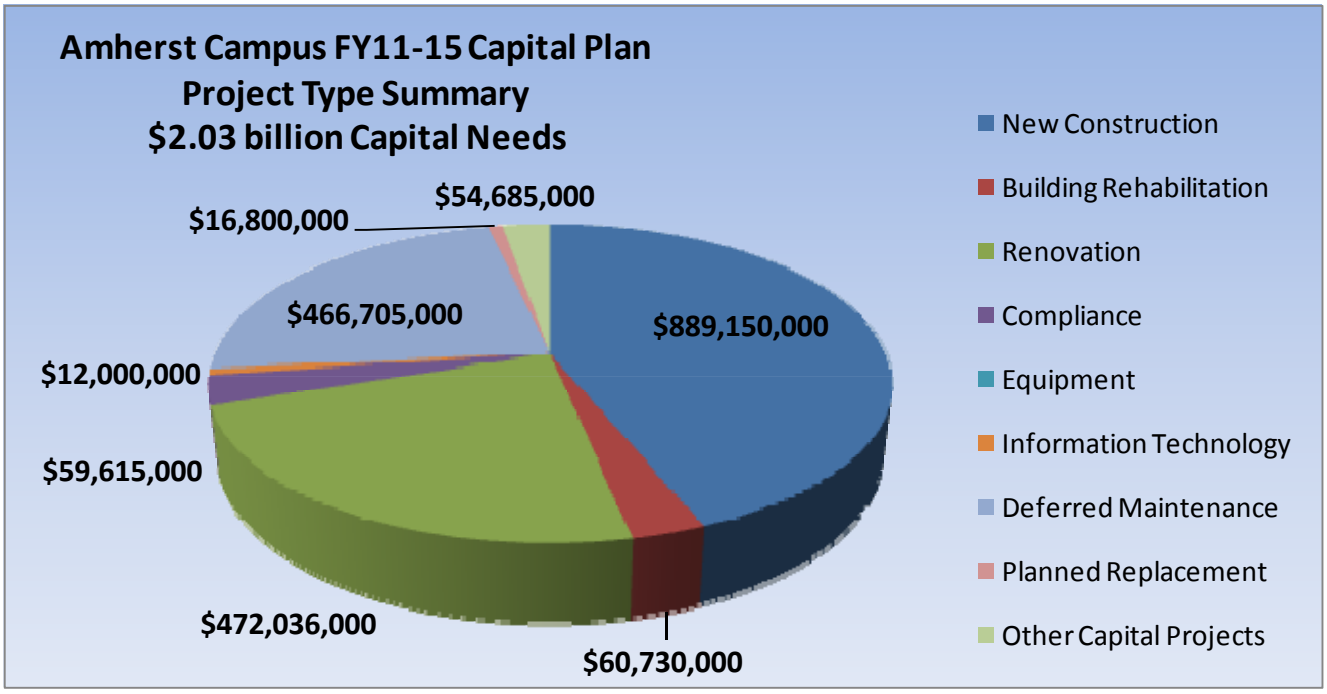
Campus Priority	Campus Project Names	Project Type	Program Type	Total Project Cost Est. August 2010
	Critical Unfunded Projects			
68	Classroom & Instructional Tech Improvements	RV	TL	$2,000,000
69	Elevator Repairs	DM	BI	$2,000,000
70	Machmer fire protection and MEP	DM	BI	$5,250,000
71	Boyden Gym bathroom and ventilation	DM	BI	$8,000,000
72	Dubois Library HVAC	DM	BI	$2,750,000
73	Thompson Hall HVAC and steam distribution	DM	BI	$2,200,000
74	Totman renovations for Kinesiology	BR	R	$13,500,000
75	Totman addition for Kinesiology	NC	R	$16,000,000
76	New Laboratory Science Building Fit out	NC	R	$50,000,000
77	Hasbrouck Renovations	BR	R	$10,000,000
78	LGRC repairs and modernization	RV	BI	$32,000,000
79	Morrill Complex repairs and modernizations	RV	BI	$30,000,000
80	Bartlett South Renovations and Façade Repairs	DM	TL	$10,000,000
81	Bartlett North Renovations and Façade Repairs	DM	TL	$5,000,000
82	Dubois Façade Replacement Study	DM	BI	$2,000,000
83	Campus Utility Upgrades - Steam Line Replacements	DM	BI	$7,000,000
84	Campus Utility Upgrades - Electric Distribution System	DM	BI	$5,100,000
85	Hasbrouck Lab Addition Renovations	RV	R	$15,300,000
86	Boyden elevator	CO	BI	$2,100,000
87	Boyden Gym Renovations	RV	SL	$10,000,000
88	Fine Arts Center Repairs, Renovations & Modernizations	DM	BI	$20,000,000
89	Chenoweth Addition Repairs and Renovations	DM	R	$10,600,000
90	Dubois Repairs and Renovations	DM	BI	$36,000,000
91	Thompson Repairs and Renovations	BR	TL	$13,900,000
92	Totman Renovations	RV	BI	$10,000,000
93	Goodell Renovations	RV	BI	$16,000,000
94	Roadway Repairs and Improvements	DM	BI	$3,000,000
95	ADA Academic Building Compliance Renovations	RV	BI	$12,000,000
96	Environmental/Hazardous Materials Remediations	RV	BI	$12,000,000
97	Life Safety/Code Compliance	CO	BI	$12,000,000
98	Campus Security Improvements	O	BI	$5,000,000
99	Goodell MEP and fire doors	DM	BI	$2,641,000
100	Holdsworth Hall fumehoods and MEP	DM	BI	$5,650,000
101	Furcolo ceilings, structural and MEP	DM	BI	$1,785,000
102	Deferred Maintenance Projects - FY11-15	DM	BI	$30,000,000
103	Swing Space Renovation or New	NC	R	$35,000,000
104	Campus Utility Upgrades - Steam Line Replacements	DM	BI	$10,000,000
105	Campus Utility Upgrades - Electric Distribution System	DM	BI	$12,900,000
106	Isenberg School of Management Repairs	DM	TL	$6,000,000
107	Marston Repairs and Renovations	DM	TL	$13,700,000
108	University Health Services code and MEP	DM	BI	$2,100,000
109	Whitmore Hall ductwork/electrical	DM	BI	$3,620,000
110	Herter code and controls	DM	BI	$1,200,000
111	Goessmann Lab Renovations	RV	R	$8,000,000
112	Roadway Repairs and Improvements	DM	BI	$5,000,000
113	Marcus Repairs	DM	R	$12,000,000
114	CLIP Landscape Improvements Phase I & Phase II	DM	BI	$7,000,000
115	Arnold Backfill Renovations	RV	TL	$3,650,000
116	Parking Trailers Replacement	PR	BI	$3,000,000
117	Student Union Repairs, Code, Renovations ,Addition or Nev	NC	SL	$80,000,000
118	Flint Laboratory drainage, fire protection, steam distribution	DM	BI	$2,228,000
119	Tobin Hall lab security and MEP	DM	BI	$1,450,000
120	Physical Plant Building HVAC, exterior masonry, and electric	DM	BI	$3,600,000
121	Hasbrouck Lab Repairs	DM	TL	$2,300,000
122	Herter Repairs	DM	TL	$3,800,000
123	Fernald Repairs	DM	TL	$1,100,000
124	Campus Utility Upgrades - Water and Sewer	DM	BI	$2,100,000
125	Stockbridge Renovations for PSIS non lab functions	RV	TL	$3,200,000
126	Infrastructure Improvements	DM	BI	$5,000,000
127	Hasbrouck Fire Alarm	CO	BI	$1,200,000
128	Pedestrian Safety Improvements	DM	BI	$5,000,000
129	Herter Renovations	RV	TL	$10,000,000
130	Tobin Repairs & Renovations	RV	R	$25,000,000
131	Furcolo Renovations	RV	TL	$4,000,000
132	Academic/Classroom building II	NC	TL	$90,000,000
133	Morrill I Auditorium	RV	TL	$2,000,000
134	E-Lab II renovations	RV	TL	$4,000,000
135	Old Chapel Renovation	RV	BI	$15,000,000
136	French, Fernald and Clark renovations	RV	TL	$3,000,000
137	Stockbridge Hall complete fire suppression	CO	TL	$12,500,000
138	Conte Polymer windows	DM	BI	$5,000,000
139	Research Affairs heat pumps, MEP	DM	BI	$1,400,000
140	ISOM deferred maintenance	DM	BI	$6,500,000
141	Wilder deferred maintenance	DM	BI	$1,000,000
142	ISOM renovations & addition	NC	TL	$40,000,000
143	Campus Utility Upgrades - Steam Line Replacements	DM	BI	$7,000,000
144	Fine Arts Center Repairs, Renovations & Modernizations	DM	BI	$8,900,000

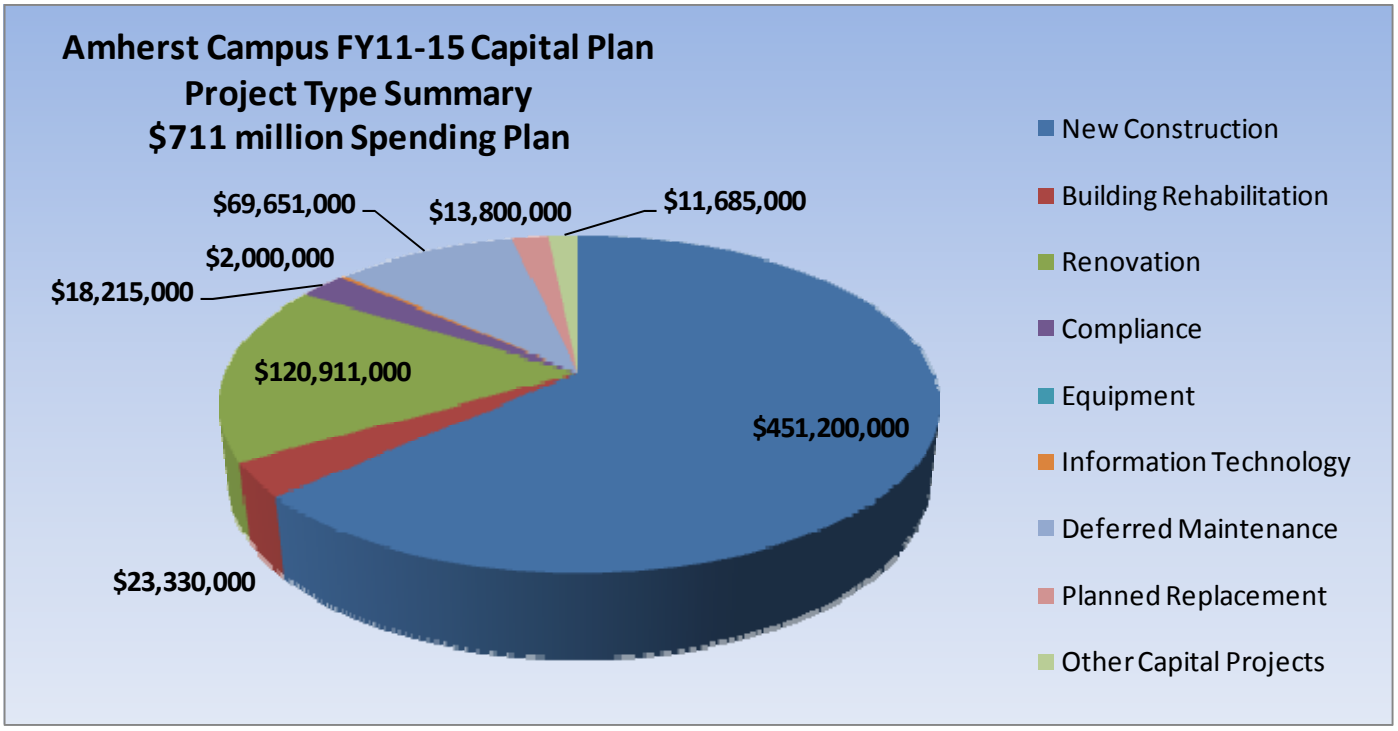
Campus Priority	Campus Project Names	Project Type	Program Type	Total Project Cost Est. August 2010
	Critical Unfunded Projects			
145	Dubois Repairs and Renovations	DM	BI	$21,000,000
146	Dubois Façade Replacement	DM	BI	$18,000,000
147	Athletics Champion Center Phase I	NC	SL	$35,000,000
148	New Baseball Field	NC	BI	$1,800,000
149	Football support facility	NC	BI	$12,000,000
150	Softball Facility Lighting	NC	BI	$1,100,000
151	Rudd Field Support Building	NC	BI	$10,000,000
152	Recreation Center Phase II	NC	SL	$32,000,000
153	Gladchuck practice field artificial turf	NC	BI	$3,000,000
154	Athletics Facilities Upgrade	RV	SL	$3,000,000
155	Softball Pitching Facility	NC	BI	$1,800,000
156	Tennis Court Enclosure	NC	BI	$10,400,000
157	Roadway Repairs and Improvements	DM	BI	$4,000,000
158	Facility Demolitions	O	BI	$10,000,000
159	Classroom & Instructional Tech Improvements	RV	TL	$8,000,000
160	Farm and outlying stations renovations	RV	BI	$4,500,000
161	Life Safety/Code Compliance	CO	BI	$10,000,000
162	Polymer/GRC Chilled Water - Expand Capacity	DM	BI	$1,150,000
163	Chiller Replacements	DM	BI	$1,150,000
164	Deferred Maintenance Projects	DM	BI	$30,000,000
165	Deferred Modernization Projects	DM	BI	$30,000,000
166	New Parking Structures	NC	BI	$16,000,000
167	Stockbridge Hall mechanical room	DM	BI	$1,000,000
168	Mather Career Center HVAC, drainage and doors	DM	BI	$1,880,000
169	Renovate Curry Hicks	RV	SL	$4,000,000
170	Campus Moves	RV	BI	$10,000,000
171	Environmental/Hazardous Materials Remediations	RV	BI	$15,000,000
172	ADA Compliance Renovations	RV	BI	$5,000,000
173	Mechanical Engineering Elab I	RV	R	$1,500,000
174	Telephone System Replacement	IT	BI	$10,000,000
175	Campus Security Improvements	O	BI	$5,000,000
176	Campus Wide Card Access System	O	BI	$8,500,000
177	Renovate Hampden Dining Commons	RV	SL	$11,600,000
178	Whitmore Renovations	RV	BI	$19,000,000
179	North Pleasant Street Road Improvements	O	BI	$9,000,000
180	University Club Structural Repairs	RV	BI	$4,000,000
181	FAC Concert Hall	RV	BI	$1,600,000
182	Rand Theater Renovations	RV	SL	$12,000,000
183	Renaissance Center Great Hall	RV	SL	$2,575,000
184	Wayfinding and Signage	O	BI	$1,000,000
185	West Experiment Station relocate occupants and mothball	O	R	$1,000,000
186	Stockbridge Pedestrian Road	NC	BI	$3,850,000
187	Holdsworth Fire Alarm	RV	BI	$700,000
188	Campus Wide Security System	CO	BI	$1,600,000
189	Science Facility Renovations	RV	R	$15,000,000
190	Property Acquisitions	O	BI	$1,500,000
191	LGRC Window Replacement	RV	BI	$6,000,000
192	Coal Yard Decommission	CO	BI	$2,000,000
193	Energy Efficiency Equipment Installations	RV	BI	$1,500,000
194	Electric Distribution Upgrade	RV	BI	$2,000,000
195	Chenoweth Food Science Phase II	RV	R	$2,000,000
196	Solar Panels	O	BI	$2,000,000
197	Waltham & Glouster renovations	RV	BI	$5,000,000
	SubTotal Undesignated Projects			*$1,320,929,000*

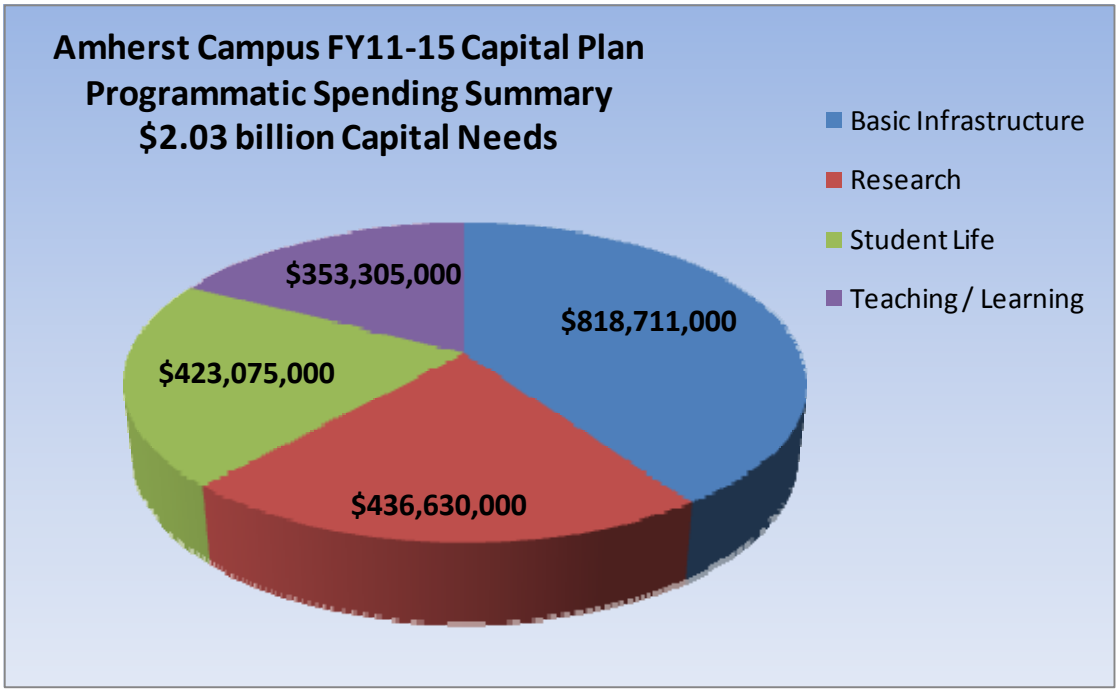
		Total 5-yr spending incl. Undesignated
Amherst Campus Grand Total FY11-15	*$2,312,604,500*	*$2,031,721,000*

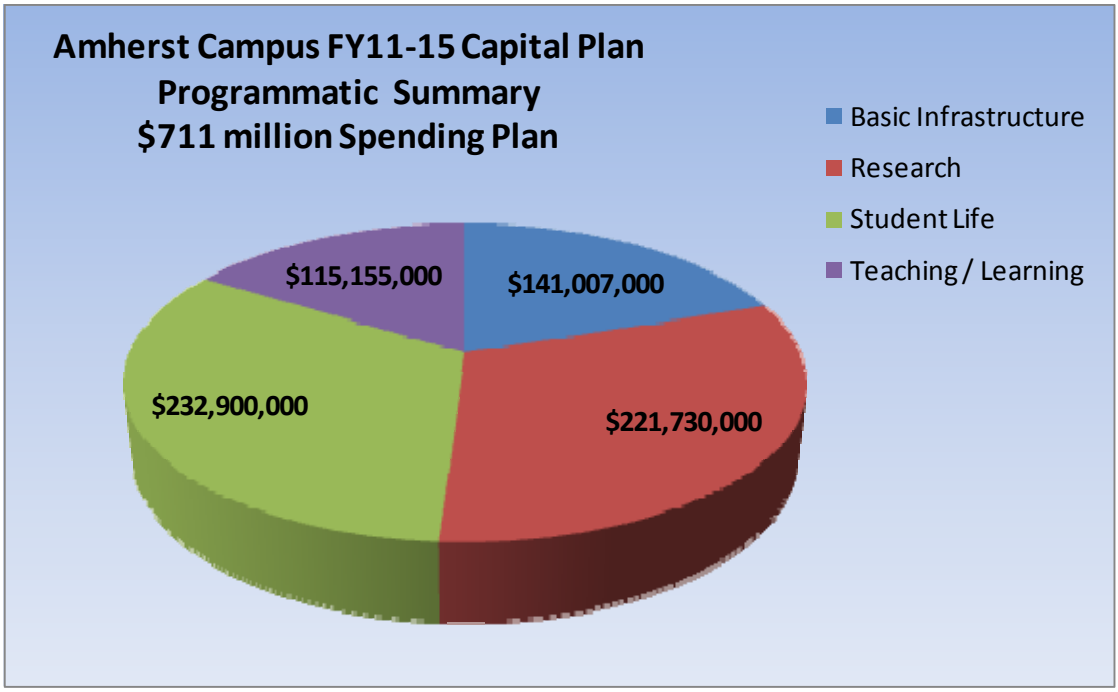

Amherst Campus FY11-15 Capital Plan
Source of Funds
$2.03 billion Capital Needs
$10,100,000
$120,015,000
$378,330,000
$1,320,929,000
$202,347,000
University Local Funds
Private Fundraising & Federal Funding
University Borrowing
State Capital Support
Currently Unfunded / Undesignated Activity


Amherst Campus FY11-15 Capital Plan
Source of Funds
$711 million Spending Plan
$10,100,000
$120,015,000
$202,347,000
$378,330,000
University Local Funds
Private Fundraising & Federal Funding
University Borrowing
State Capital Support


Amherst Campus FY11-15 Capital Plan
Project Type Summary
$2.03 billion Capital Needs
$54,685,000
$16,800,000
$466,705,000
$889,150,000
$12,000,000
$59,615,000
$472,036,000
$60,730,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


Amherst Campus FY11-15 Capital Plan
Project Type Summary
$711 million Spending Plan
$69,651,000
$13,800,000
$11,685,000
$2,000,000
$18,215,000
$120,911,000
$451,200,000
$23,330,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


Amherst Campus FY11-15 Capital Plan
Programmatic Spending Summary
$2.03 billion Capital Needs
Basic Infrastructure
Research
Student Life
Teaching / Learning
$353,305,000
$818,711,000
$423,075,000
$436,630,000


Amherst Campus FY11-15 Capital Plan
Programmatic Summary
$711 million Spending Plan
Basic Infrastructure
Research
Student Life
Teaching / Learning
$115,155,000
$141,007,000
$232,900,000
$221,730,000

CAPITAL PLAN UPDATE
FY2011-2015
UNIVERSITY OF MASSACHUSETTS - Boston

From Plan to Performance

"Masons, when they start upon a building,
Are careful to test out the scaffolding;

Make sure that planks won't slip at busy points,
Secure all ladders, tighten bolted joints.

And yet all this comes down when the job's done
Showing off walls of sure and solid stone….."

Excerpted from the poem, *Scaffolding* by Seamus Heaney

Introduction

Since submission of last year's UMass Boston Capital Plan entitled, "Planning for the Future of UMass Boston", UMass Boston has been engaged in processes to do just that by thorough and detailed study of the key elements of it programmatic goals. Some of the results of these studies, which will guide the work included in this FY11-FY20 Capital Plan, include:

The **Master Plan**, on which so much creative energy was focused, resulted in a 25-year framework to "Improve Connections" and was published in December 2009.

The **Framework Plan: Transportation** with its travel demand forecasts, data on campus access, traffic, roadway and intersection conditions, parking and public transportation counts, pedestrian and bike circulation information and loading and service concerns was released in October 2009.

The **Medium Voltage Distribution Feasibility Study**, completed in December 2009, addresses a longstanding and serious deferred maintenance issue related to the campus electrical infrastructure by recommending a design for a replacement facility to house the campus' electrical switchgear and NSTAR metering cabinets as well as infrastructure upgrades within the existing Utility Plant, including replacement of the aged main distribution feeder cables and the Plant's electrical transformer.

The **Study for the Integrated Sciences Complex: Consensus Solution**, was approved in November 2009 and, in February 2010, the State's Designer Selection Board (DSB) approved the continuation of Goody Clancy's services for the design of the ISC, officially marking the end of the programming phase and the start of building design.

The **Geotechnical and Environmental Data Assessment** was finalized in February 2010 and provides a comprehensive summary of UMass Boston's geology – fill, soil, sand, marine clay, glacial till and shale bedrock – information about conditions on the campus as compiled by others and supplemented with field verified boring information. This information is now available for reference during the design and construction of the numerous transformative projects in UMass Boston's future.

The **General Academic Building Number 1 (GAB I) Conceptual Space Program** (main activities and functions) was developed during winter and spring 2009-2010 and approved by Chancellor Motley in July 2010. It is envisioned that GAB I will serve large numbers of students, faculty and staff in approximately 150,000 square feet of state-of-the-art classrooms, specialized teaching spaces, and new homes for several academic departments. This new building, to be located on the site of the current Beacons Parking Lot will help define and frame the new Central Quad, a core element of the campus Master Plan. An RFP for architectural and engineering services for this new building will be issued by the University of Massachusetts Building Authority in September 2010.

The **Space Allocation Plan** is nearing completion with three specific focused studies:

1. The **Code Strategy for Building Renovations Report**, was completed in July 2010 and will help maximize the use of limited renovation funds by identifying the scope and budget implications for code upgrades that may be required by potential desired renovations in Wheatley and McCormack Halls.

2. The **General Purpose Classroom Analysis**, currently in its final stages, has confirmed existing classrooms by capacity, type, condition, and utilization in order to help meet program and pedagogical needs at 15,000 and 18,000 student enrollments.

3. The **Consensus Solution** part of the Space Allocation Plan, is currently in progress, and will represent the agreed upon plans for renovation of Wheatley and McCormack and other spaces on campus once the construction of the Integrated Sciences Building has left portions of these buildings vacant. Departmental space migration, right sizing of departments, swing space options and probable order of magnitude costs are being investigated.

The **Energy and Utility Master Plan**, a compilation of the existing conditions of UMass Boston's utilities, as well as plans for future energy needs and energy efficiency measures, and options for the relocation of the infrastructure needed to support them is in final draft and expected to be published this Fall.

Like the "scaffolding" in Seamus Heaney's poem, these studies will frame the work of this Capital Plan, allow UMass Boston to move forward with the "doing" of that which has been planned, and will result in "walls of sure and solid stone". And, utility tunnels and infrastructure, too!

Master Plan-related Projects

> "Once, when she was digging a hole to plant an apple tree, he asked her why she worked so hard, when the tree wouldn't bear fruit for many years. "I may never see this tree in bearing," she told him, "but somebody will."
>
> Senator George Norris (whose support of the establishment of the Tennessee Valley Authority sowed the seeds for the expansion of the electrification of America to homes far and wide)

At 77% of the proposed ten-year Capital Plan, Master Plan-related projects are UMass Boston's highest priority over these next 5 years. Already the "doing" of our many plans has begun. Highlighting these priorities are the following:

The first of several new academic buildings, indeed the first new academic building in 40 years on this campus, the **Integrated Sciences Complex** is in the Schematic Design Phase and we expect ground will be broken in spring of 2011 for its construction.

The **Utility and Roadway Relocation Project Request for Proposal**, released by the University of Massachusetts Building Authority in March 2010, is nearing award with the final interviews in August 2010 for a design firm to plan and provide preliminary design services for a campus-wide utility corridor and roadway loop (including curbing, sidewalks, lighting, and streetscape). The utility corridor and roadway must be designed to provide future flexibility and capacity for both existing buildings and for the future buildings identified in the Master Plan. The planning and preliminary design shall provide for coordinated construction of the roadway and utility corridor in logical phasing to meet the infrastructure requirements of planned campus building improvements. The relocation of the campus' utilities out from the Upper Level of the Substructure to a new utility corridor will allow for the demolition of the substructure and the creation of a Central Quadrangle, a core element of the campus Master Plan's design.

These two priorities, two of sixteen included in this Capital Plan, are a harbinger of the future and form the basis, with other key elements of the Master Plan, of UMass Boston's Expanded Environmental Notification Form (EENF) recently filed with the Secretary of Energy and Environmental Affairs' MEPA Office.

Basic Infrastructure/Deferred maintenance/Compliance Projects

> "Presumption should never make us neglect that which appears easy to us, nor despair make us lose courage at the sight of difficulties."
>
> Benjamin Banneker, African American surveyor who helped survey the boundaries for Washington, D.C.in the 1790s

Even as UMass Boston's highest priority turns to its transformative redevelopment, its commitment to reorganizing its operations to care for and commit to the repair and maintenance of its basic infrastructure and to the compliance with life safety codes, grows. Evidence of this is highlighted by several key projects within this Capital Plan, as follows:

The Request for Proposals for architectural and engineering services related to **Selective Roof Repairs and Replacement** was released in March 2010 and will address the identified work scope on the following buildings:

1) Replacement of McCormack Hall 3rd Floor membrane roof; 2) Replacement of a portion of the Science Center 3rd Floor roof; 3) Replacement of the Clark Gymnasium sprayed-on roof; 4) Replacement of the Service and Supply Building membrane roof; 5) Repair of the Clark Athletic Center plaza waterproofing; and 6) Miscellaneous repairs to roof membranes, roof drains and skylights at Campus Center, Healey Library, the Science Center, and Wheatley Hall.

The design for **Accessibility Improvements to Selective UMass Boston Restroom Facilities** is complete and includes designs to make seven *existing* toilet rooms (3 women's, 3 men's, 1 unisex) fully accessible and also includes creation of three *new* fully accessible restrooms. In addition, eighteen existing toilet rooms will be renovated to improve their accessibility in a variety of ways, including grab bars installed in the right locations and at the right heights, installation of automatic door openers, flush valves and faucets, and installation of height appropriate soap dispensers, toilet paper holders and hand towel dispensers. At a cost of $1.3 million, these improvements, which will be made in Wheatley and McCormack Halls, Healey Library and Quinn Administration Buildings (Health Services), will also result in three new accessible drinking fountains.

This Capital Plan seeks to make wise use of limited resources while safeguarding the institution's assets and commitment to access by all.

Teaching/Learning/Research Projects

"The learning college places learning first and provides educational experiences for learners anyway, anyplace, anytime."

Terry O'Banion, "A Learning College for the 21st Century"

Admittedly, most of the Master Plan-related Projects included in this Capital Plan could instead be referred to as Teaching/Learning/Research Projects in that the biggest positive impact of the Master-Plan-related Projects will be on these areas; and that is as it should be. The Master Plan designation, however, has been reserved for those projects resulting from the master planning process. The projects highlighted under this Teaching/Learning/Research designation will, however, have no less of an impact on the educational experience of our students. Several are highlighted, as follows:

Although our Strategic, Capital and Master Plans trumpet our university's plans and dreams for transforming our campus, we are not waiting for a future environment that will help us foster the community we desire; rather, we have created and are continuing to create spaces on campus, especially for our students, that support their varied activities on campus – studying, socializing, dining, being mentored, and relaxing. **Student Space Upgrades**, included within the Capital Projects Under $500,000 section, will create gathering spots on campus. Tables, chairs, marker boards, picnic tables, and soft seating will be provided in some 12 to 15 areas across campus to make places that are currently unused or uninviting into places that one planner calls "pleasant places that encourage lingering"

The **Information Technology Enterprise Architecture Project** is helping the Information Technology Services Division establish a University-wide roadmap to achieve the University's mission by helping the university's information technology systems to evolve, to develop new systems, and to take advantage of emerging technologies that optimize mission value. This project and those who are managing it recognize the wisdom of the observation that "Success in the new economy will go to those who can execute clicks-and mortar strategies that bridge the physical and the virtual worlds" (Harvard Business Review).

Our Master Plan's theme of "Improving Connections", in both the physical and virtual worlds has indeed begun.

Substructure-related Projects

"Infrastructure history does not need to be so dramatic, but when it is in the public eye, it is often because of breaches such as the one in Chicago in April 1992….As the flood so powerfully demonstrated, the perils of forgetfulness can be grave…."

From "The Chicago Underground Flood of '92: Hidden Landscapes and Forgotten Perils in American Cities" by William Cronon

UMass Boston is delighted to report that the funding of Substructure-related Projects is decreasing as the interim stabilization project, which is in construction, draws ever closer to closeout. The campus foundation is being stabilized as the vertical support and lateral braces are installed. Our attention is thus redirected to our future.

The Future: Plan to fund New Construction

Of the total proposed capital spending for the ten year period from FY11 to FY20, new construction accounts for $635.2 million or 77% of the total (this includes $123 million in self-financing projects for parking and student housing). The planned $635.2 million of new construction will be funded as follows:

	Project Cost by Funding Source	
FY11-FY20 Construction Project	**Amount**	**Source(s)**
Integrated Sciences Complex (ISC)	$100,000,000	Higher Education Bond Bill funding
	$47,000,000	UMBA 2003-1 Bond proceeds
	$5,000,000	HEFA Master Lease
Total ISC Project Cost	$152,000,000	
General Academic Building #1	$100,000,000	UMBA future bond borrowing
General Academic Building #2	$100,000,000	Higher Education Bond Bill funding
	Project Cost by Funding Source	
FY11-FY20 Construction Project	**Amount**	**Source(s)**
Relocation of Campus Utility Systems (Phase I and Phase II)	$88,375,000	UMBA future bond borrowing
New electrical switchgear facility	$3,000,000	UMBA future bond borrowing
Tri-Generation Facility	$25,000,000	UMBA future bond borrowing
University Drive Reconfigurations and connection to Mt. Vernon Street	$16,000,000	UMBA future bond borrowing
Wayfinding/Landscaping of campus	$7,500,000	UMBA future bond borrowing
Pool Facility	$10,000,000	UMBA future bond borrowing
Athletic Fields Replacement	$2,500,000	UMBA future bond borrowing
Parking Garage (1,200 spaces)	$35,000,000	UMBA future bond borrowing
Construction of Modular Facility for WUMB	$4,000,000	WUMB Fundraising
Construct seawall and HarborWalk on the north shore of the Columbia Point peninsula adjacent to JFK Library	$3,800,000	UMBA Fall 2009 bond borrowing
Living and Learning Center #1	$88,000,000	UMBA future bond borrowing

UMass Boston's Capital Plan FY11-FY20 will indeed bring it *From Plan to Performance* and will result in the renewal and transformation of UMass Boston's spirit and place.

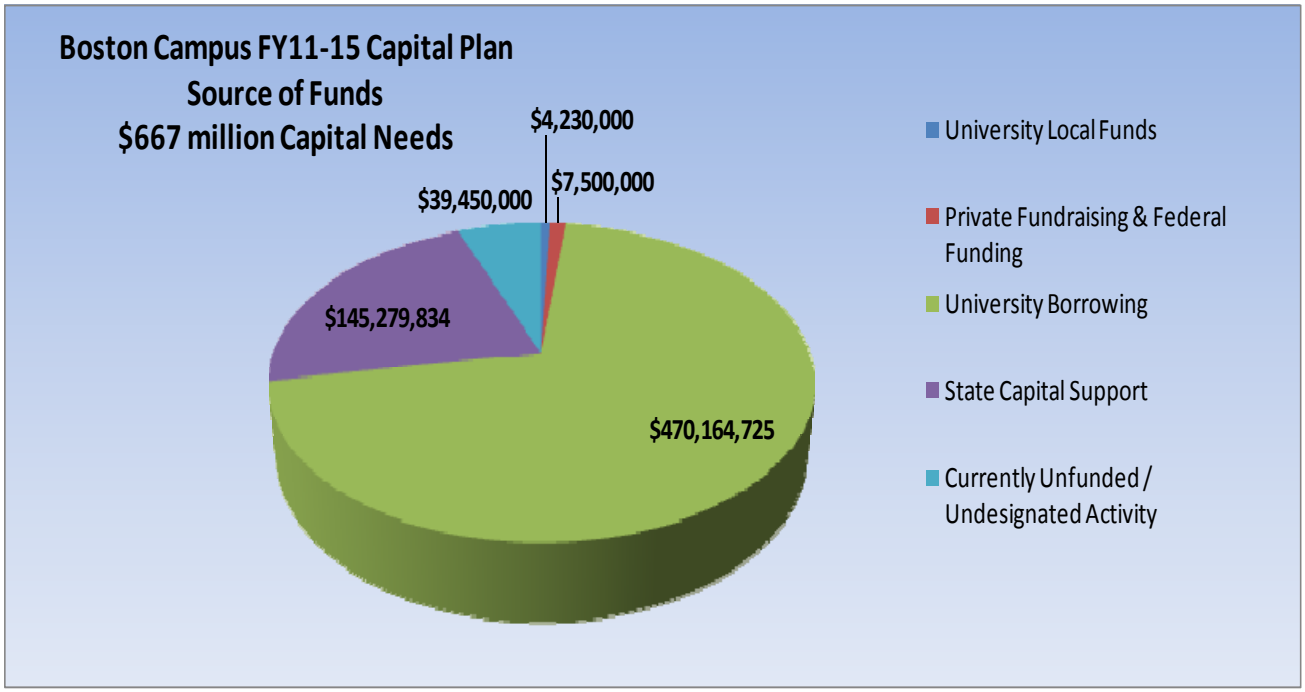
University of Massachusetts FY11 Capital Plan Update
Boston Campus Projects

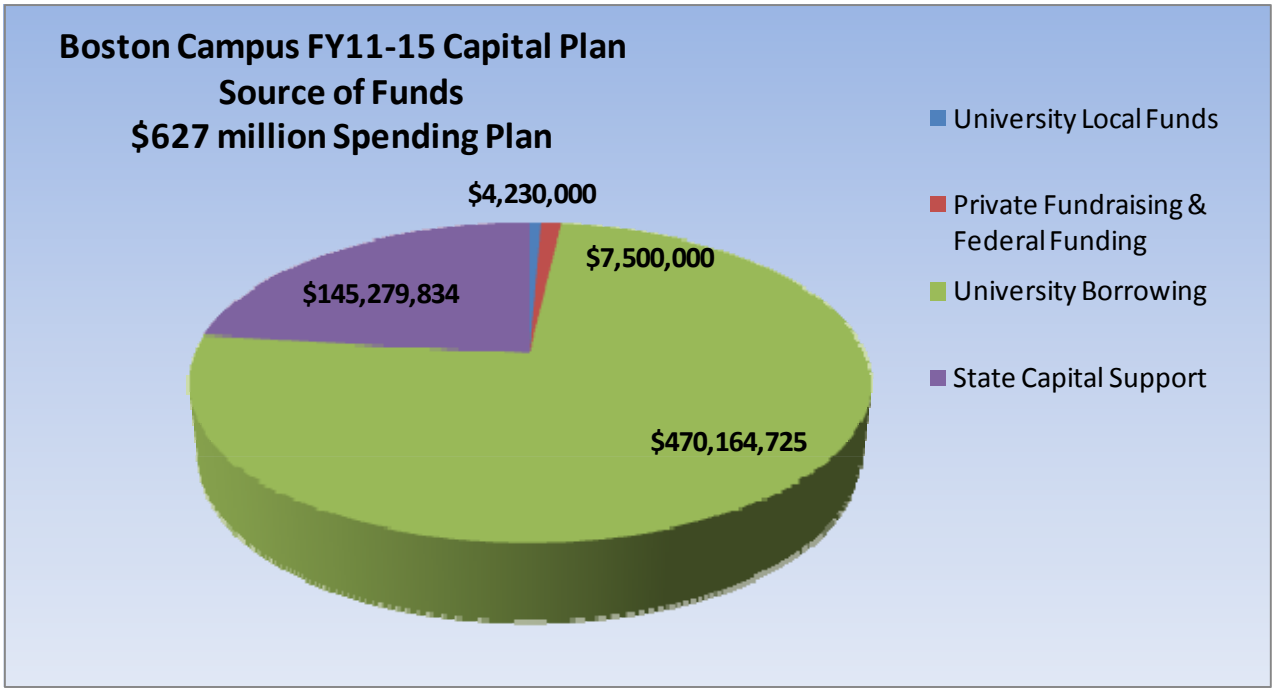
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2010	Five Year Spending Anticipated FY11-15 Cash Flow
	Designated Projects				
	Basic Infrastructure (Life Safety/Deferred Maintenance)				
BI01.1	Replace Primary Electrical Switchgear in the Utility Plant (1)	DM	BI	$2,500,000	$2,500,000
BI01.2	Construct New Structure for Primary Electrical Switchgear (1)	NC	BI	$3,000,000	$3,000,000
BI02	Healey Library: Fire Protection Improvements (Install Fire Sprinklers, Replace Fire Alarm System and Fire Pumps) (1)	CO	BI	$7,000,000	$7,000,000
BI03	Campus-Wide: Create ADA-conforming Restrooms and Accessible Pathways in Healey Library, McCormack Hall, the Science Center and Wheatley Hall	CO	BI	$1,300,000	$1,150,000
BI04	Campus-wide: Central IT Upgrades/Replacements	IT		$2,500,000	$2,000,000
BI05	McCormack Hall and Science Center: Roof Replacements and Repairs	DM	BI	$3,700,000	$3,700,000
BI06	Healey Library: Emergency Generator Replacement	DM	BI	$800,000	$250,000
BI08	Utilities: Primary Electrical System Upgrades and Emergency Generator Replacements	DM	BI	$4,000,000	$4,000,000
BI09	Campus-wide: Replace Exterior Doors to Ensure Climate Control (including vestibules) and Code Compliance	DM	BI	$3,200,000	$3,200,000
BI11	Grounds: Sea Wall and Harborwalk Construction on North-Facing Shore	NC	BI	$3,800,000	$3,800,000
BI12	Clark/McCormack Hall/Quinn Admin/Service/Wheatley Hall: Elevator Renovations -- Code/Restoration	DM	BI	$2,875,000	$2,875,000
BI13.1	Calf Pasture Pumping Station: Study Adaptive Reuse of CPPS and Tunnel System	BR	BI	$500,000	$500,000
BI13.2	Calf Pasture Pumping Station: Security and Button-up Envelope at ownership transition.	DM	BI	$500,000	$500,000
BI14	Campus-wide: ADA Compliance	CO	BI	$1,000,000	$1,000,000
BI15	Saltwater Pump House: Mechanical System Upgrades and Savin Hill Cove Dredging	DM	BI	$2,000,000	$2,000,000
BI16	Quinn Administration Building: Install Fire Suppression System and Upgrade Fire Alarm System	CO	BI	$1,200,000	$1,200,000
BI17	Projects Less Than $500,000 (Aggregate)	DM	BI	$4,819,559	$4,819,559
	Master Plan Projects				
M01.1	Master Plan Phase I: Construct New Integrated Sciences Complex	NC	R	$152,000,000	$151,300,000
M01.1	Upgrades to Accommodate ISC and GAB including new chiller and boiler (amount could be reduced by approximately $1 million if non-contact cooling is used for ISC instead of cooling tower)	NC	BI	$3,000,000	$3,000,000
M02.1	Master Plan Phase I: Relocate Campus Utility Systems from Substructure (Phase I)	NC	BI	$62,125,000	$62,125,000
M02.2	Master Plan Phase I: Relocation and Reconfiguration of University Drive North and University Drive West	NC	BI	$16,000,000	$16,000,000
M02.3	Master Plan Phase I: Relocate Campus Utility Systems from Substructure (Phase II)	NC	BI	$26,250,000	$13,125,000
M03	Master Plan Phase I: Construct New Academic Building 1	NC	TL	$100,000,000	$100,000,000
M04	Master Plan Phase I: Renovations to Existing Campus Buildings	BR	TL	$75,000,000	$75,000,000
M05	Master Plan Phase I: Study Substructure and Science Center Demolition and post demolition construction including Catwalk system and new at grade entrances	O	BI	$2,500,000	$2,500,000
M05.1	Master Plan Phase I: Study Substructure and Science Center Demolition	O	BI	$2,000,000	$2,000,000
M05.2	Master Plan Phase I: Construct new campus Greenhouse as required with demolition of the Science Center	NC	R	$5,000,000	$5,000,000
M05.3	Master Plan Phase I: Relocate University Data Center due to the demolition of the Science Center	BR	BI	$3,000,000	$3,000,000
M05.4	Master Plan Phase I: Substructure and Science Center Demolition	O	BI	$9,800,000	$9,800,000
M06	Master Plan Phase I: Construct new Trigeneration Facility to accommodate increased campus chilled water, hot water and electrical service needs.	NC	BI	$25,000,000	$12,500,000
M07	Master Plan Phase I: Construct New Academic Building 2	NC	TL	$100,000,000	$24,500,000
M08	Master Plan Phase I: Relocate Track/Athletic Field	NC	BI	$2,500,000	$2,500,000
M09	Master Plan Phase I: Wayfinding, Pathways and Landscaping	NC	BI	$7,500,000	$7,500,000
M10	Master Plan Phase I: Secure or Demolish Bayside Expo Center building and initial property improvements	DM	TL	$6,000,000	$6,000,000
M10.1	Master Plan Phase I: Study of future Bayside Property Development.	O	TL	$350,000	$350,000
M10.2	Master Plan Phase I: Future redevelopment of Bayside Property	NC	TL/SL	TBD	$0
M11	Master Plan Phase I: Construct 1,000 Bed Living and Learning Center	NC	SL	$88,000,000	$0
M12	Master Plan Phase I: Construct +/- 1,200 Vehicle Parking Garage	NC	BI	$35,000,000	$35,000,000
M13	Facility to be constructed at BCHS	O	SL	TBD	$0
M14	Master Plan Phase I: Construct new pool facility	NC	SL	$10,000,000	$10,000,000
M15	Master Plan Phase I: New public art for Campus Green	O	SL	$1,000,000	$1,000,000
M16	Master Plan Phase I: Purchase or Lease Additional Swing Space prior to completion of GAB1 to accommodate growth and M/W Renovations	O	TL	$2,500,000	$2,500,000

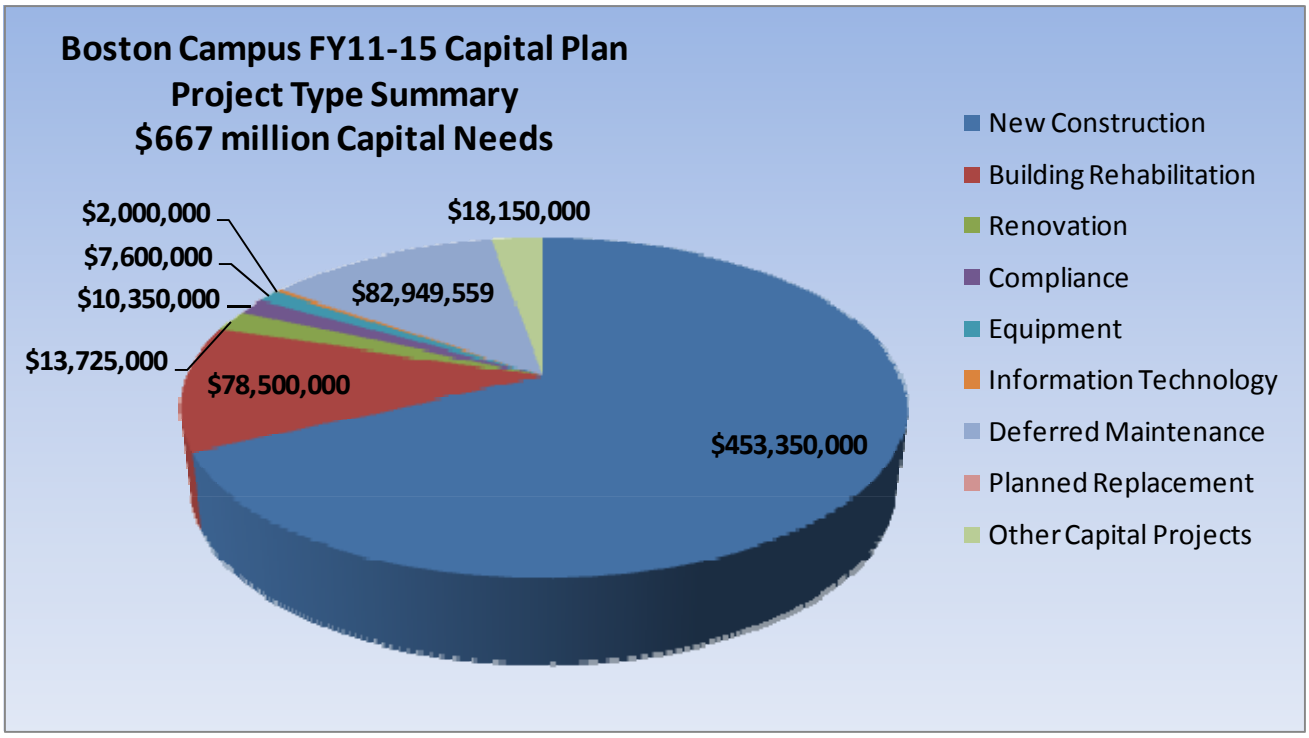
	Substructure Projects				
S01	Substructure: Interim Structural Stabilization	DM	BI	$21,820,000	$2,500,000
S02	Substructure: Utility Plant Roof Replacement	DM	BI	$4,570,000	$4,570,000
S03	Substructure: Upper & Lower Level Egress/Access	DM	BI	$6,185,000	$6,185,000
S04	Substructure: Replace Acid Neutralization Tanks	DM	BI	$500,000	$500,000
	Teaching/Learning/ Research				
TR01	Healey Library: Construct 3 new classrooms on the 4th Floor	RV	TL	$1,000,000	$1,000,000
TR02	McCormack Hall: Renovation of Cafeteria, Servery and Kitchen Space for Academic Use	RV	TL	$775,000	$775,000
TR03	Relocation of College of Nursing and Health Sciences Center for Clinical Education and Research	RV	TL	$1,500,000	$1,500,000
TR04	Campuswide: Renovations to Support Teaching and Research	RV	TL	$450,000	$450,000
TR05	Life Sciences: Center for Personalized Cancer Therapy	RV	R	$10,000,000	$10,000,000
TR06	Instructional Equipment Upgrades and Replacements	E	TL	$15,000,000	$7,500,000
TR07	Relocation WUMB Radio to Modular Building	NC	TL	$4,000,000	$4,000,000
	SubTotal Designated Projects			***$845,019,559***	***$627,174,559***

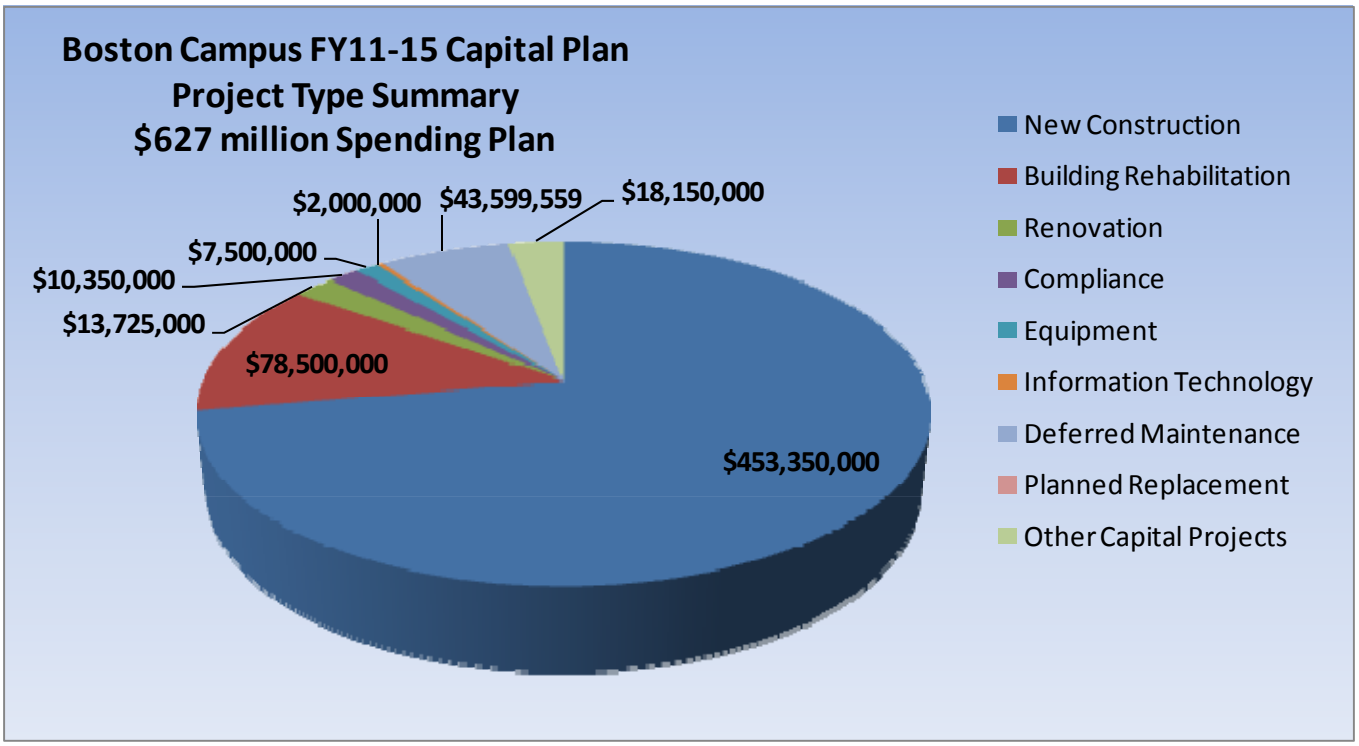
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2010
	Critical Unfunded Projects			
1	Clark Athletic Center: Mechanical and Structural Repairs and Upgrades to Pool Facility	DM	BI	$5,000,000
2	Clark Athletic Center: Building Envelope Repairs	DM	BI	$4,000,000
3	Healey Library: Building Envelope Repairs	DM	BI	$5,000,000
4	McCormack Hall: Building Envelope Repairs	DM	BI	$5,000,000
5	Quinn Administration Building: Building Envelope Repairs	DM	BI	$3,000,000
6	Service & Supply: Building Envelope Repairs	DM	BI	$2,000,000
7	Wheatley Hall Building Envelope Repairs	DM	BI	$5,000,000
8	Science Center: Emergency Building Repairs	DM	BI	$1,000,000
9	Clark Athletic Center: HVAC Upgrades (excluding pool area)	DM	BI	$1,850,000
10	Healey Library: HVAC Upgrades	DM	BI	$1,250,000
11	McCormack Hall: HVAC Upgrades	DM	BI	$1,550,000
12	Quinn Administration Building: HVAC Upgrades	DM	BI	$1,100,000
13	Service & Supply: HVAC Upgrades	DM	BI	$950,000
14	Utility Plant: HVAC Upgrades	DM	BI	$500,000
15	Wheatley Hall: HVAC Upgrades	DM	BI	$2,150,000
16	Study for Repair/Upgrade of Arthur Martin Observatory	E	TI	$100,000
	SubTotal Undesignated Projects			***$39,450,000***

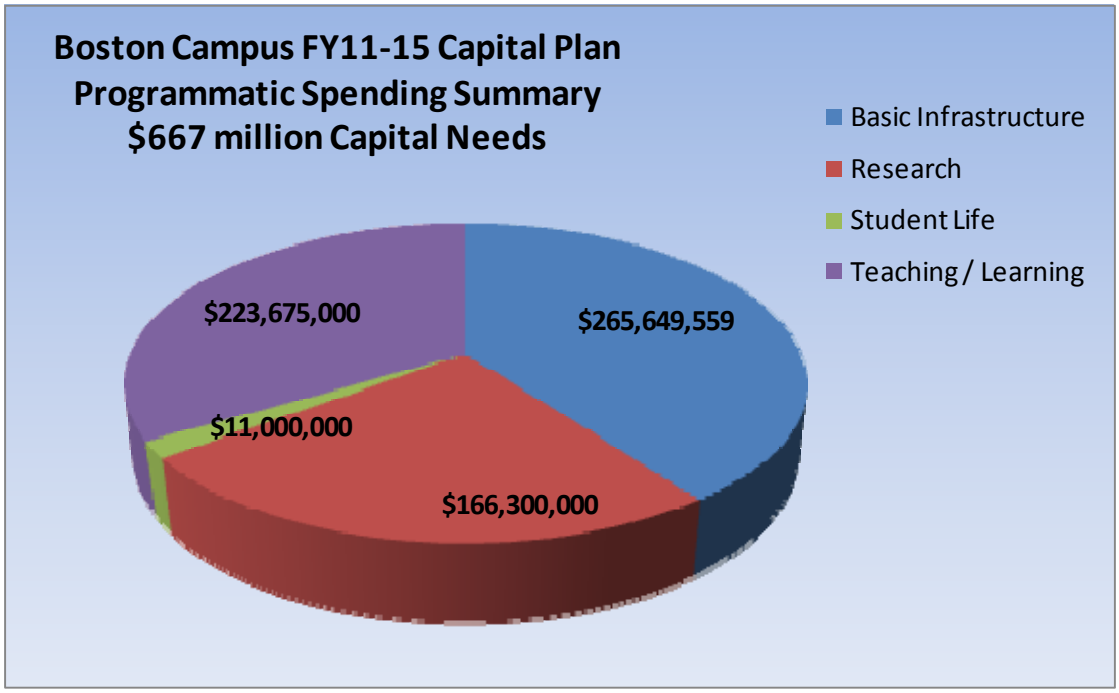
		Total 5-yr spending incl. Undesignated
Boston Campus Grand Total FY11- 15	***$884,469,559***	***$666,624,559***

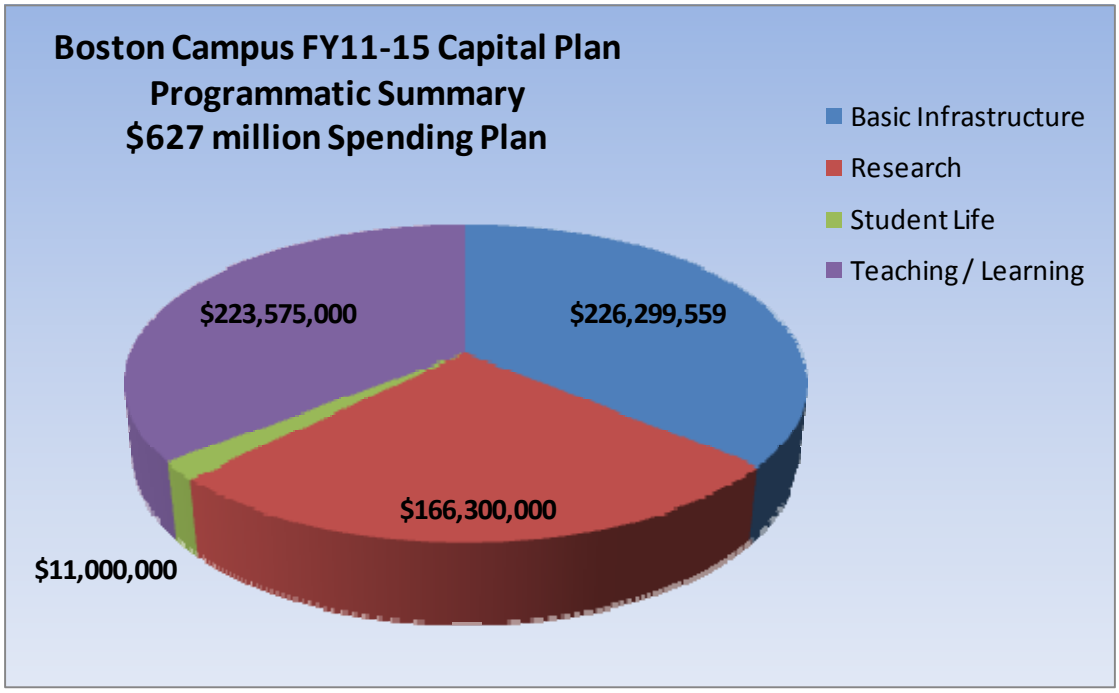

Boston Campus FY11-15 Capital Plan
Source of Funds
$667 million Capital Needs
$4,230,000
$7,500,000
$39,450,000
$145,279,834
$470,164,725
University Local Funds
Private Fundraising & Federal Funding
University Borrowing
State Capital Support
Currently Unfunded / Undesignated Activity


Boston Campus FY11-15 Capital Plan
Source of Funds
$627 million Spending Plan
$4,230,000
$7,500,000
$145,279,834
$470,164,725
University Local Funds
Private Fundraising & Federal Funding
University Borrowing
State Capital Support


Boston Campus FY11-15 Capital Plan
Project Type Summary
$667 million Capital Needs
$2,000,000
$7,600,000
$10,350,000
$13,725,000
$18,150,000
$82,949,559
$78,500,000
$453,350,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


Boston Campus FY11-15 Capital Plan
Project Type Summary
$627 million Spending Plan
$2,000,000
$43,599,559
$18,150,000
$7,500,000
$10,350,000
$13,725,000
$78,500,000
$453,350,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


Boston Campus FY11-15 Capital Plan
Programmatic Spending Summary
$667 million Capital Needs
Basic Infrastructure
Research
Student Life
Teaching / Learning
$223,675,000
$265,649,559
$11,000,000
$166,300,000


Boston Campus FY11-15 Capital Plan
Programmatic Summary
$627 million Spending Plan
Basic Infrastructure
Research
Student Life
Teaching / Learning
$223,575,000
$226,299,559
$166,300,000
$11,000,000

CAPITAL PLAN UPDATE
FY2011-2015
University of Massachusetts - Dartmouth

Overview

The FY2011 – FY2015 Dartmouth Campus Capital Plan Update reflects the continued capital support for the recommendations of the 2005 Master Plan, the goals of the Strategic Plan, ***Engaged, Embedded, and Evolving***, established in 2000 and updated in 2007, and the visions identified in the NEASC accreditation self-assessment.

Our updated plan is consistent with previous submissions and our highest priority continues to be the completion of the renovations to the Claire T. Carney Library. These renovations will transform the campus creating state of the art facilities including a scholarly commons area, a learning commons area, improved building mechanical systems, and more student study space at the perimeter of the building. The shift of student study space to the perimeter of the building takes advantage of both natural daylighting and the beautiful views of the campus.

Our second priority is the first of several significant changes from the plan submitted last year. The "Energy/Water Savings Project" has been elevated to our second priority reflecting the pending implementation of several energy projects. Over the last year, the university has been working tirelessly with our partners at DCAM to finalize the planning and design phases of three significant projects. The energy services contract, photovoltaic arrays, and wind turbine projects will increase energy efficiency, reduce energy consumption, and increase energy generation across the University. Over the next couple of years, as these projects are built out, the University will see the addition of new energy efficient equipment, a gas fired cogeneration turbine, a wind turbine, and several photo-voltaic arrays.

Our third priority remains the "Biomanufacturing Building" project, a facility that will provide pre-clinical scale Biomedical and Biopharmaceutical Process Suites designed and operated to meet Good Laboratory Practice (GLP) guidelines and open access applied Research and Development experiments within the Commonwealth of Massachusetts, . Another significant change from last year's submission is the elevation in priority and the increase in scope of the "SMAST/DMF Expansion" project. The University's Facilities, Planning, Design, & Construction Department has been working with the faculty and staff at SMAST to review current space usage and develop a detailed ten year growth plan. The plan reflects the anticipated growth in both graduate programs and research. This growth is consistent with the University's strategic vision and identifies a doubling of the current net square footage of the program. The University intends to self fund a study through DCAM to certify the programmatic study and has made this important project the fourth priority of the Capital Plan.

The final significant change from last year's plan is the addition of a project titled "New Academic Building". The establishment of new programs continues to be hampered by space limitations. The rise in the need to lease space to meet programmatic need seems to confirm the need for a new building, but the University is intending to self fund a study to certify the programmatic need for a new academic building.

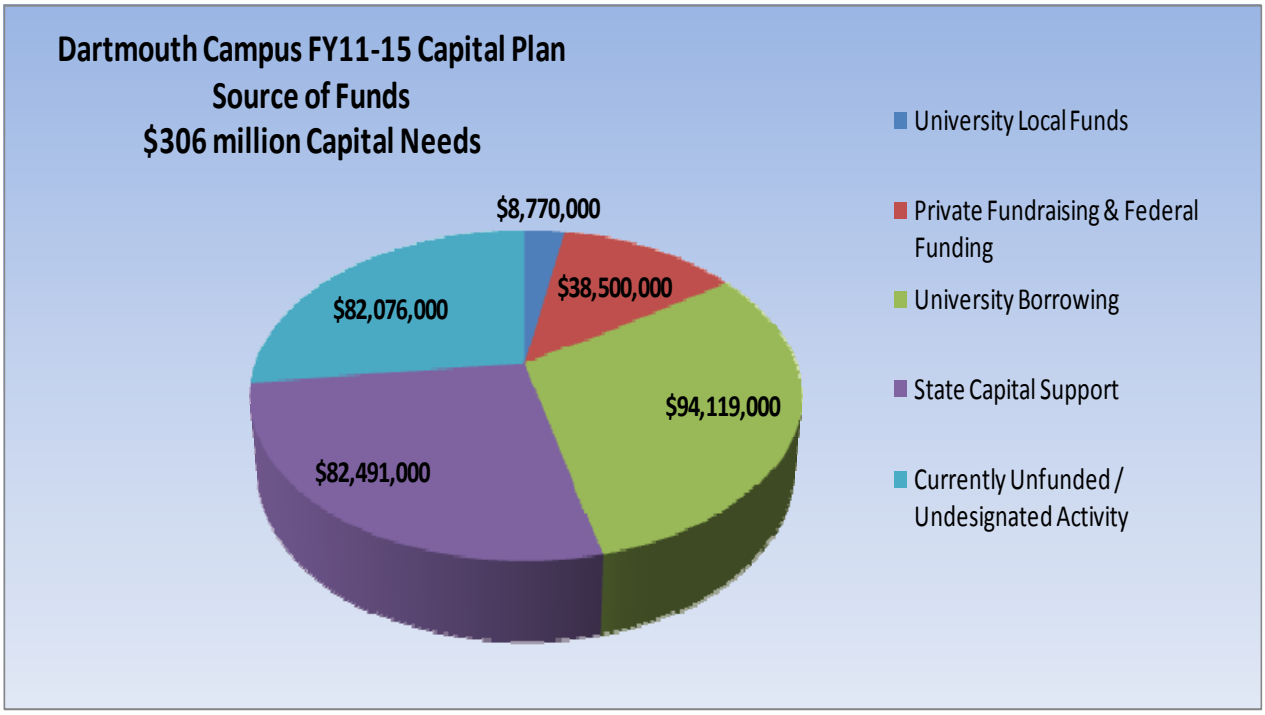
The Dartmouth Campus Capital Plan Update for FY2011 – FY2015 represents an assessment of the capital needs of the campus based on currently available information. We are acutely aware that emergencies can and do disrupt the best of plans. We also know that both the availability and the manner in which funds are made available may affect our plans and our priorities. Nevertheless, we believe the attached update is an accurate assessment, broad enough in scope to accommodate the vagaries of funding as well as emergencies.

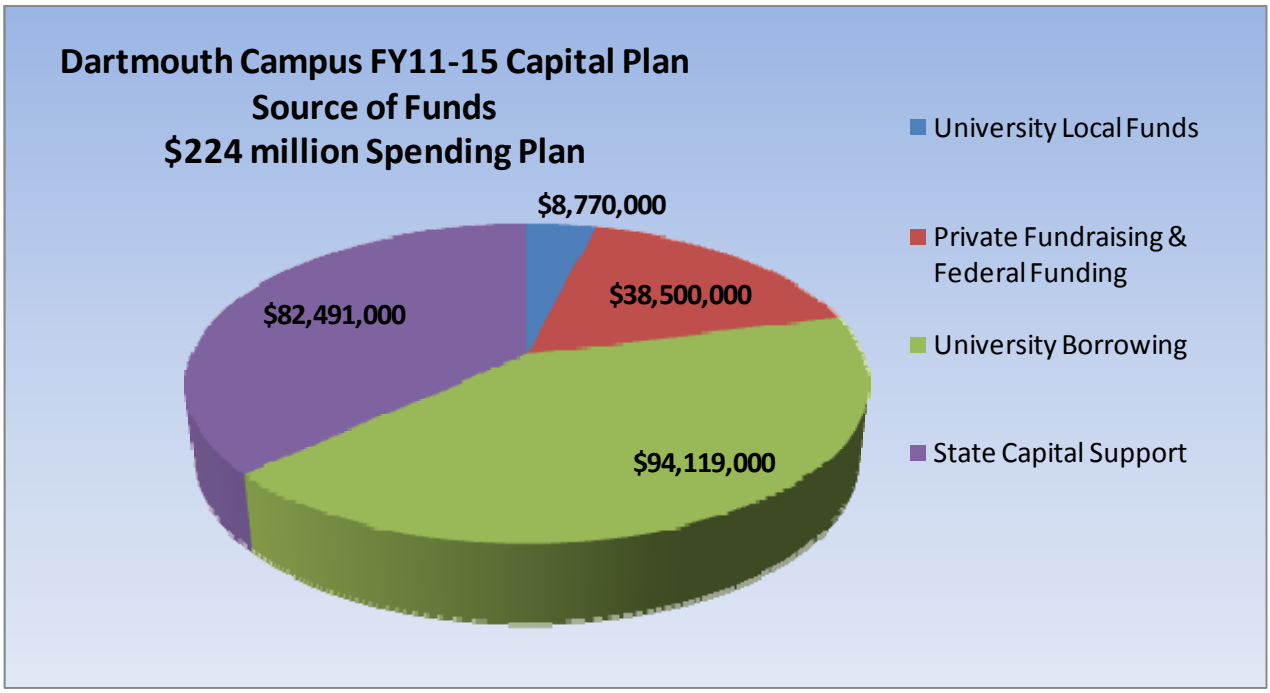
University of Massachusetts FY11 Capital Plan Update
Dartmouth Campus Projects

Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2010	Five Year Spending Anticipated FY11-15 Cash Flow
	Designated Projects				
1	Library Renovations	BR	TL	$44,000,000	$44,000,000
2	Energy/Water Savings Project	O	BI	$40,000,000	$40,000,000
3	Biomanufacturing Building	NC	R	$26,000,000	$26,000,000
4	SMAST/DMF Expansion	NC	R	$48,000,000	$20,100,000
5	Classroom and Laboratory Upgrades and Learning Space Improvements	RV	TL	$11,440,000	$5,000,000
6	ATMC Acquisition	O	R	$11,400,000	$11,400,000
7	Feasibility/Planning New Academic Bldg	NC	TL	$500,000	$500,000
8	Charlton College of Business, Phase II	NC	TL	$15,000,000	$15,000,000
9	Replace Failed HVAC Systems	DM	BI	$3,500,000	$3,500,000
10	Campus Entrance Building	NC	SL	$45,000,000	$4,000,000
11	Reroof Four Oldest Residence Halls	DM	SL	$1,900,000	$1,900,000
12	Repair Four Oldest Residence Halls	DM	SL	$75,000,000	$23,000,000
13	ADA Renovations Immediate Needs	CO	BI	$2,184,000	$750,000
14	Basic Infrastructure Repairs	DM	BI	$61,702,000	$1,702,000
15	LARTS Air Conditioning Installation	RV	BI	$3,016,000	$3,016,000
16	New Academic Building	NC	TL	$55,000,000	$0
17	Landscape/Lighting Improvements	O	SL	$1,832,000	$832,000
18	Roadway Repairs	DM	BI	$5,720,000	$500,000
19	Power Plant Upgrades/MEP	DM	BI	$4,371,000	$1,521,000
20	PCB Transformer Replacements	CO	BI	$1,023,000	$1,023,000
21	Elevator Upgrades	CO	BI	$1,352,000	$1,352,000
22	Asbestos Removal	CO	BI	$400,000	$400,000
23	Network & Telecom Infrastructure	IT	BI	$2,565,000	$2,565,000
24	Central Administrative Services Building	NC	BI	$12,690,000	$0
25	Locker & Training Room Renovations	RV	SL	$3,120,000	$0
26	Non-critical HVAC, Infrastructure and Envelope Repairs	DM	BI	$3,640,000	$2,000,000
27	Athletic Field Replacement	O	SL	$819,000	$819,000
28	Fitness Center Expansion	NC	SL	$5,000,000	$5,000,000
29	Campus Center Addition	BR	SL	$16,400,000	$3,000,000
30	Multi Purpose Field House	BR	SL	$20,800,000	$5,000,000
31	New Bedford Incubator	O	R	$5,000,000	$0
32	Taunton Life Sciences Center	O	R	$5,000,000	$0
	SubTotal Designated Projects			***$533,374,000***	***$223,880,000***

Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2010
	Critical Unfunded Projects			
33	Retrofit of Vacated Spaces from New 'Bldg Projects	NC	BI	$15,580,000
34	New Campus Center Plaza	O	BI	$2,457,000
35	Renovation Campus Auditorium	RV	TL	$11,170,000
36	Resident Dining Hall Expansion	BR	SL	$5,670,000
37	Science and Engineering/Dion Engineering Phase I	NC	TL	$22,600,000
38	Science and Engineering/Dion Engineering Phase II	NC	TL	$19,000,000
39	Centennial Drive Quadrangle	O	BI	$4,780,000
40	DCE Forensics Laboratory	BR	TL	$819,000
	SubTotal Undesignated Projects			***$82,076,000***

					Total 5-yr spending incl. Undesignated
	Dartmouth Campus Grand Total FY11-15			***$615,450,000***	***$305,956,000***


Dartmouth Campus FY11-15 Capital Plan
Source of Funds
$306 million Capital Needs
$8,770,000
$38,500,000
$94,119,000
$82,491,000
$82,076,000
University Local Funds
Private Fundraising & Federal Funding
University Borrowing
State Capital Support
Currently Unfunded / Undesignated Activity


Dartmouth Campus FY11-15 Capital Plan
Source of Funds
$224 million Spending Plan
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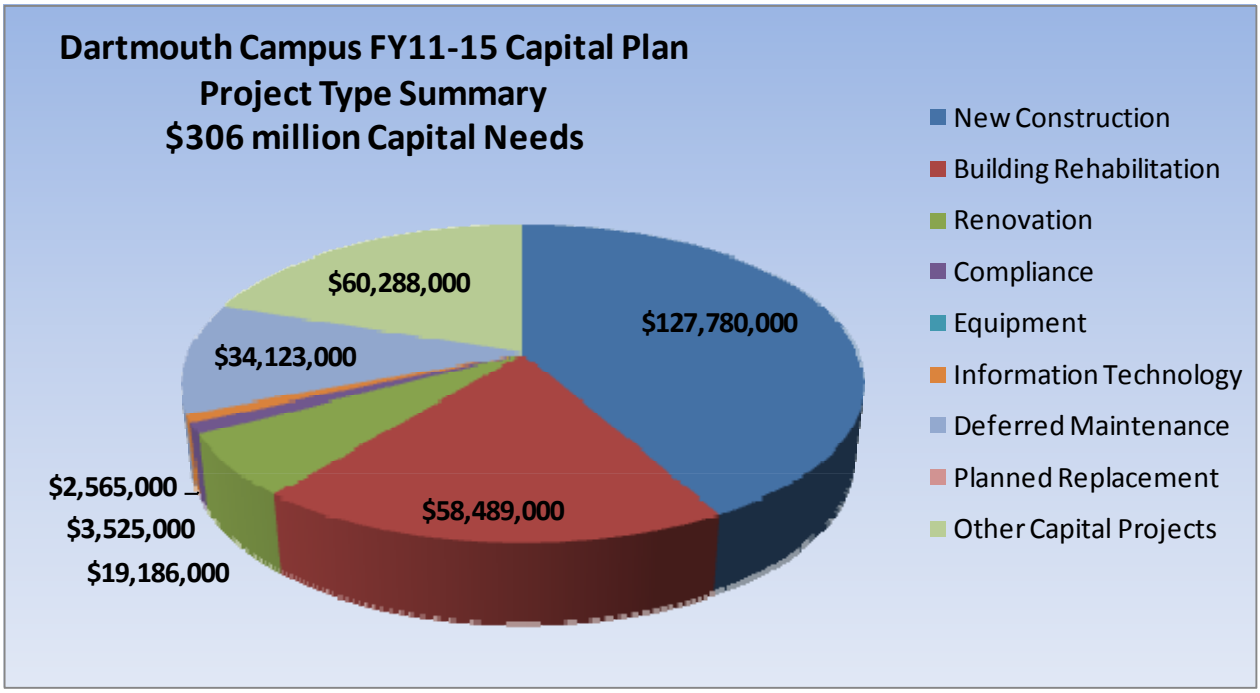
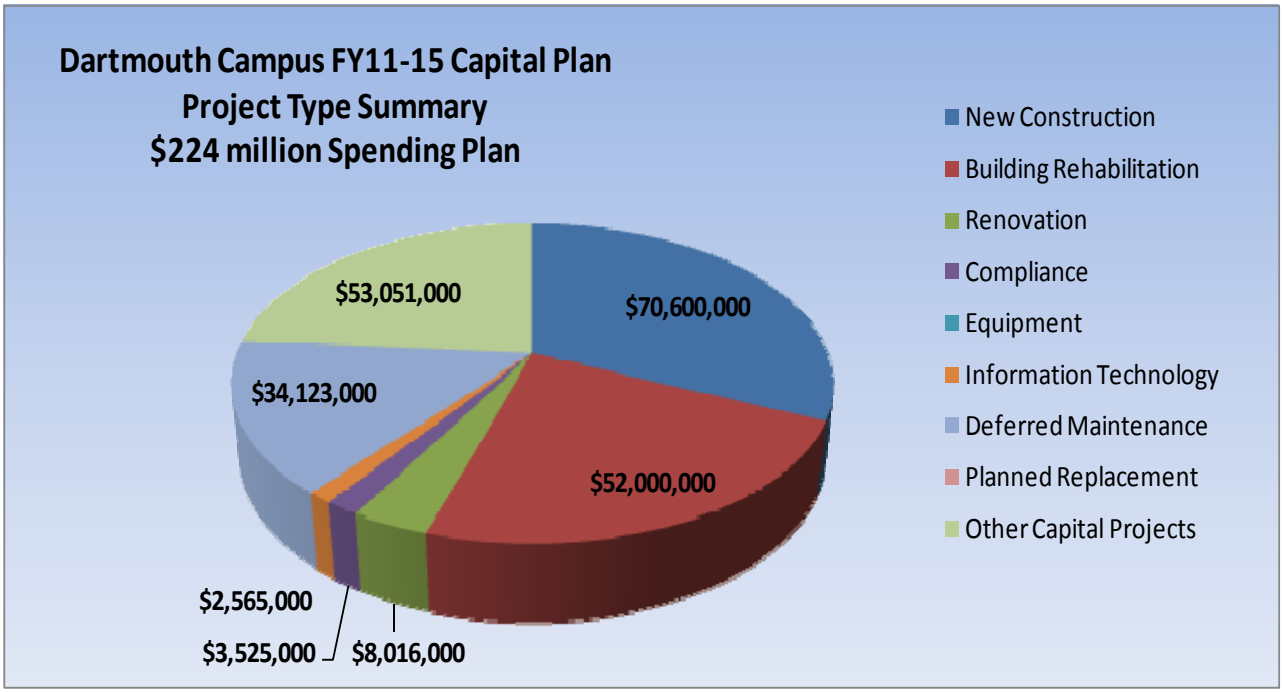
$38,500,000
$82,491,000
$94,119,000
University Local Funds
Private Fundraising & Federal Funding
University Borrowing
State Capital Support


Dartmouth Campus FY11-15 Capital Plan
Project Type Summary
$306 million Capital Needs
$127,780,000
$58,489,000
$19,186,000
$3,525,000
$2,565,000
$34,123,000
$60,288,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


Dartmouth Campus FY11-15 Capital Plan
Project Type Summary
$224 million Spending Plan
$70,600,000
$52,000,000
$8,016,000
$3,525,000
$2,565,000
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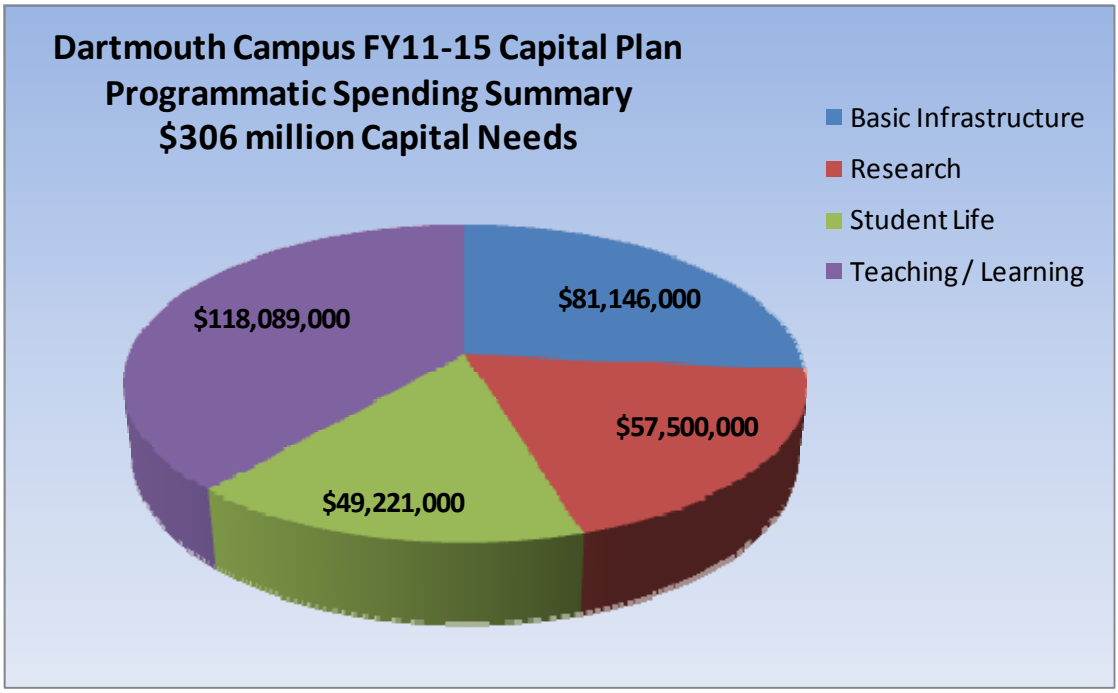
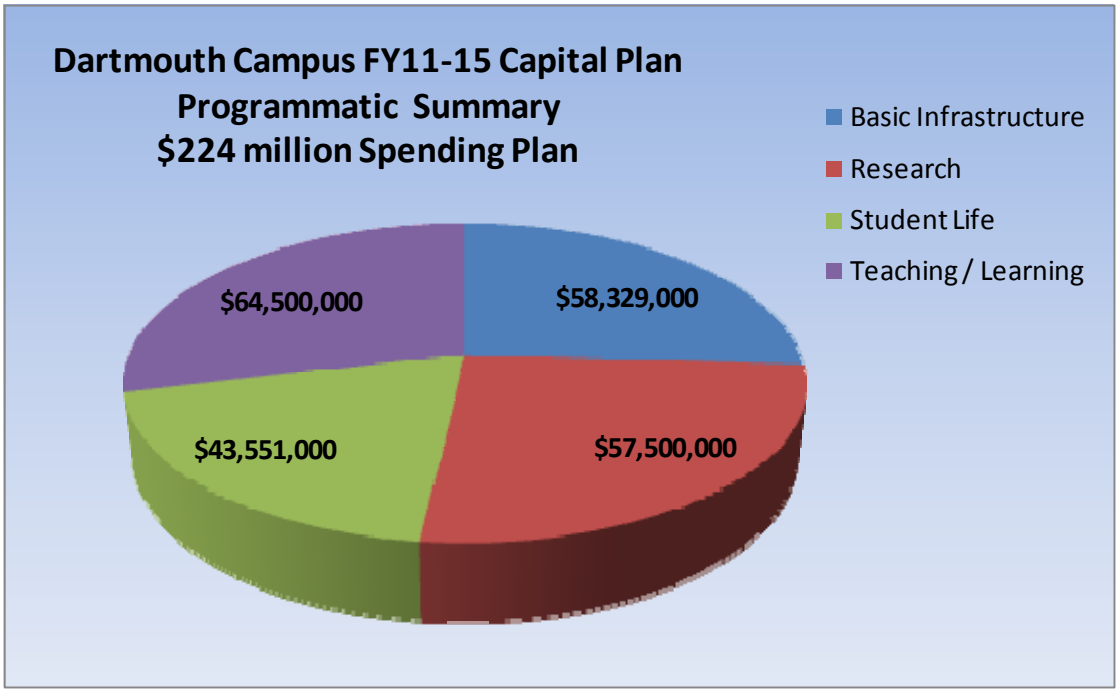
$53,051,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


Dartmouth Campus FY11-15 Capital Plan
Programmatic Spending Summary
$306 million Capital Needs
Basic Infrastructure
Research
Student Life
Teaching / Learning
$81,146,000
$57,500,000
$49,221,000
$118,089,000


Dartmouth Campus FY11-15 Capital Plan
Programmatic Summary
$224 million Spending Plan
Basic Infrastructure
Research
Student Life
Teaching / Learning
$58,329,000
$57,500,000
$43,551,000
$64,500,000

CAPITAL PLAN UPDATE
FY2011-2015
UNIVERSITY OF MASSACHUSETTS - LOWELL

The Lowell campus consists of 3 major locations: North, South and East. The North and South campuses are primarily academic buildings with some residence halls and tightly constrained playing fields; the East campus is the location of the majority of our residence halls and a very popular Recreation Center. East also houses the Wannalancit facility, Lelacheur Baseball Park and is a short walk from the Tsongas Center. Each of the campuses are densely developed and bounded by fully developed residential and business properties.

This Capital Plan Update for FY 2011 reflects the priorities outlined in the UMass Lowell 2020 Strategic Planning Initiative. UMass Lowell 2020 serves as the University's next-generation strategic plan, providing a blueprint for how the campus will achieve national and international recognition as a world-class institution over the next decade. The campus continues to partner with the University of Massachusetts Building Authority and DCAM to plan, finance and implement our ambitious capital program.
Many of our anticipated capital expenditures impact on a number and variety of our academic, research, athletic, recreational and outreach programs and partnerships. If we are to achieve our goals and aspirations, we must provide new, modern academic and research spaces, increase our residential capacity, renew our existing buildings, create new recreational opportunities, add to our capacity to host a broad range of meetings and events – academic, entertainment and civic. Our capital plan has identified approximately $895 million worth of projects that could be started within the next ten years. If we are aggressive in our planning, financing and execution we believe that we can spend approximately $459 million of this plan in the first five years (FY2011 to FY2015).

Project Highlights:

The new **Emerging Technologies Innovation Center (ETIC)** at the University of Massachusetts Lowell will focus on the development of manufacturing techniques in advanced technologies. Combining expertise in nanomanufacturing, bio-manufacturing, bioinformatics, toxics use reduction and environmental and workplace safety into a single research center will place UML at the forefront of manufacturing research and technology. The facility includes clean room space, high bay research space, and vibration -stabilized space, as well as support for other advanced research activities. The focus of the Center is to grow an already vibrant program of industry partnership, to develop manufacturing technologies that promote jobs in the Commonwealth, and to produce a highly educated workforce to attract new businesses to the state.

The facility itself is planned to be a national model for sustainable development, using the most advanced technologies for alternative energy and green building. The ETIC is funded through a combination of state economic stimulus funds, campus borrowing, and federal grants. The location selected for the ETIC required the demolition of an existing dormitory, Smith Hall which began this past spring. To compensate for this loss of beds, UMBA oversaw the redesign of floors 4-6 of Fox Hall (our largest residence hall). This project added more than 119 beds last Fall.

The Chancellor has established a goal of eventually housing 50% of our undergraduate students on-campus. This target, in combination with an expected increase in undergraduate enrollment, will add 1,500 beds to the Lowell campus. We are also expecting to substantially increase our foreign student population at both the graduate and undergraduate levels through cooperative programs with China, Ireland, Greece and India, e.g.

Again, in partnership with the President's Office and UMBA, the University of Massachusetts Lowell purchased the Doubletree Hotel in downtown Lowell. The 252-room hotel, was renamed the **UMass Lowell Inn & Conference Center**, provides housing for hundreds of University students and hosts professional and academic conferences. Phase 2 of renovations to this facility is underway and will be completed for the Spring 2011 semester. The ICC renovations will allow the University to maximize student residential life activities as well as expand conference center and hotel opportunities. The Phase 2 project is being managed by UMBA at a cost of $5 million. The acquisition and initial renovation costs were borrowed last year.

The Lowell campus has not enjoyed the opening of a new academic building in over 32 years. Many existing buildings are difficult to fully adapt to current accessibility and technology needs. The growing interest in and emphasis on interdisciplinary research and teaching makes the traditional academic floor plan increasingly less effective. This **new academic building on South** will address some of the dramatic changes and growth in student demand experienced by many South campus programs (Nursing, Criminal Justice, English and Psychology). This project is being managed by DCAM at a total cost of $40 million in state funds.

In the next several years, the campus will focus on the modernization and rehabilitation of the **Wannalancit facility**. Renovations to this mill building (converted to office use and upgraded in the 1980's) will address necessary building code and infrastructure improvements provide space for business & economic development - related users, including M2D2; and free up much-needed academic space on south and north campuses by relocating office users to this location. Renovation and fit out will be undertaken in incremental fashion over a period of time. M2D2 is the first phase, beginning construction in August 2010. The estimated cost of the Wannalancit rehabilitation is $15.5 million.

In conjunction with the President's office and UMBA, we are considering the **acquisition of a variety of existing properties** as a means of addressing several campus needs. The current real estate market is sufficiently favorable to make purchase a more cost effective option than new construction for some university facilities. Combined with the campus' strong recent enrollment growth and inadequate existing facility portfolio, property acquisitions help meet the university's needs while also providing stabilization to the local economy.

As part of the university's overall **energy improvement program**, capital improvements will be needed to increase and ensure the realization of plans for savings. While some of these improvements can be put in place through various grant, rebate and other special energy programs, many of the most important and effective ones cannot. The campus borrowed $15 million last year to begin these projects. These funds will be used to implement the energy infrastructure improvements that cannot be funded through the various grants, rebates and other energy programs now being implemented and sought. Improvements may include power plant upgrades, system upgrades at stand-alone buildings (about 30% of the university's facility inventory), controls and energy management systems, improvements to the energy performance of

distribution systems (e.g. steam and chilled water lines), among other actions, such as lighting and window replacement.

The campus has long since outgrown its very limited common space, and with the increasing emphasis on a unified campus of multiple locations, the higher performance level of students and faculty, and the increased overall campus population, there is a pressing need for a contemporary and effective **campus center**. As the quality and size of the university increase, people are at campuses for more of the day; they expect and need more places for interaction, and for common identity and meeting. The original centers at each campus - Alumni Hall and MacGauvran - have long since been filled in with other uses or transformed such that they cannot fill either current or evolving needs. Neither contributes to the unity of the campus as a whole. Study, design and construction or renovation of a central service and gathering space for the combined campuses is needed. A center would have a concentration of student affairs/student services functions, clubs, dining, learning commons, meeting and lounge spaces,. Ideally such a facility could also accommodate other activities such as academic program space, health services, university police, a commuter center, and possibly retail space. The center is to be in a location easily reached from or central to the existing campus locations with sufficient transportation, shuttle, and parking to support its function as an active central meeting place.

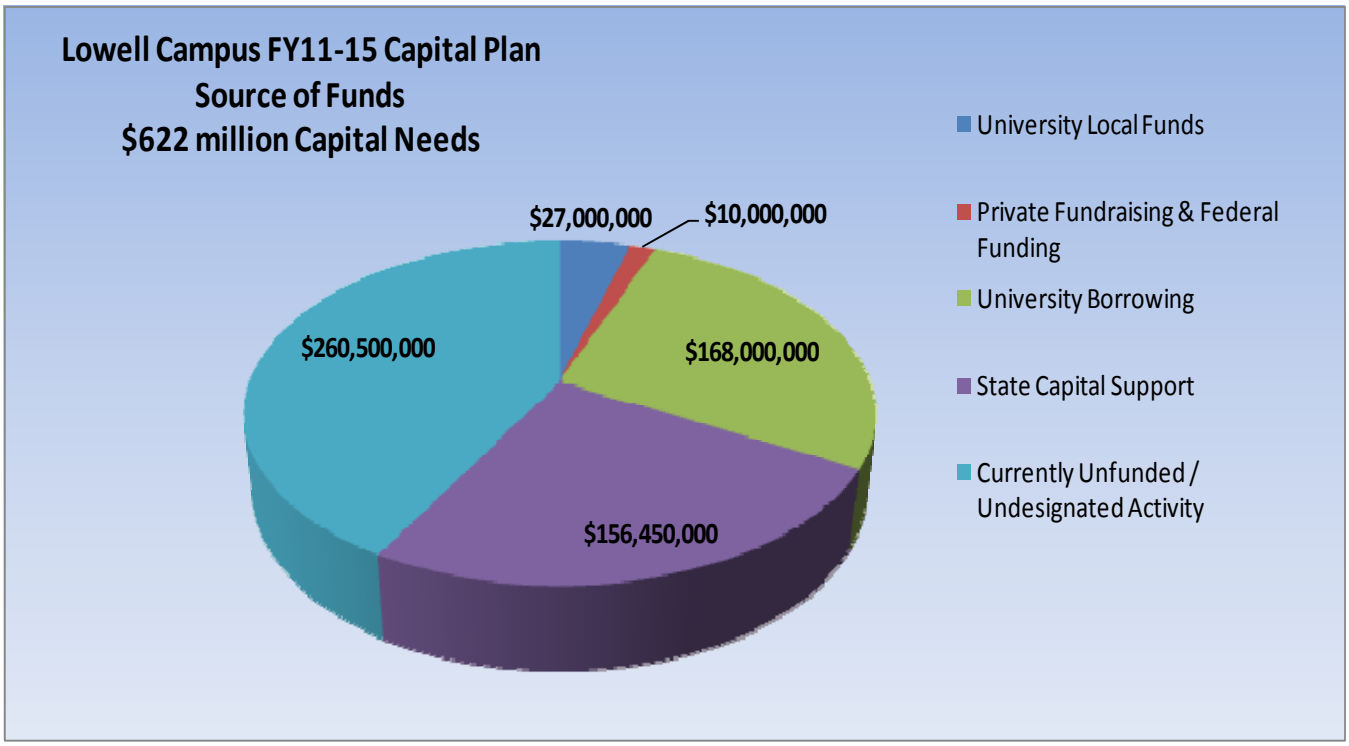
While this memo focuses on new and redirected capital activities, we are certainly continuing our efforts to reduce our backlog of deferred maintenance projects and looking to establish predictable levels of attention to well defined areas, e.g. building envelopes, power plants, roofs, interior improvements, landscaping, etc. Renewing, modernizing and enhancing existing and historic buildings on campus leverage the improvements gained through new construction and other major renovations by upgrading the entire inventory. To this end, the A&F and Facilities team continue to review the data and analysis provided by Sightlines to refine our approach to identifying and funding deferred maintenance, compliance, repair and renewal projects.

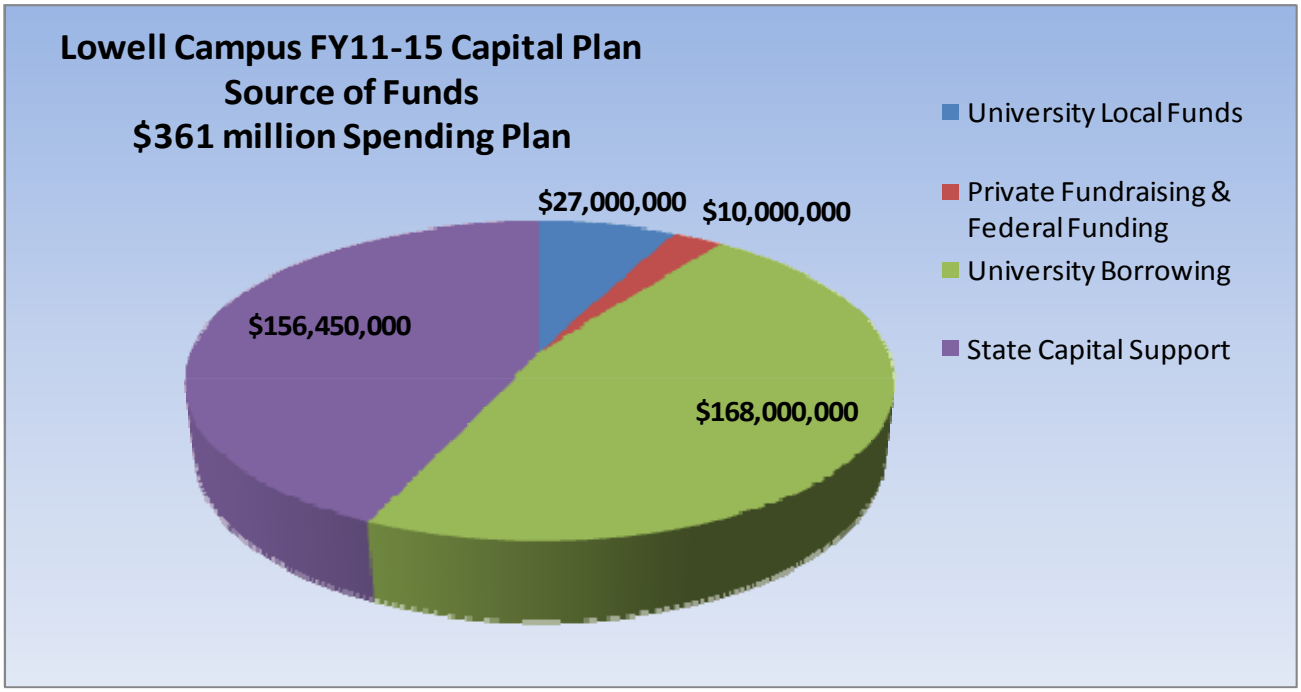
University of Massachusetts FY11 Capital Plan Update
Lowell Campus Projects

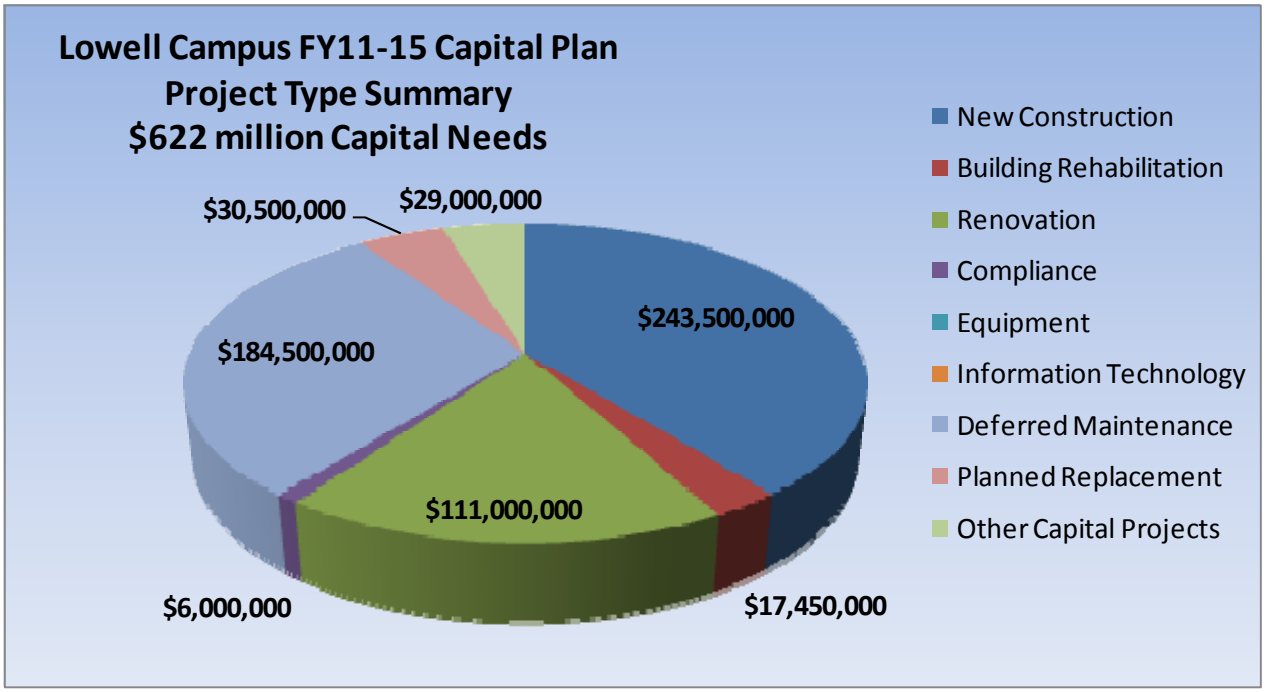
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2010	Five Year Spending Anticipated FY11-15 Cash Flow
	Designated Projects				
1	ETIC Bldg.	NC	R	$70,000,000	$55,000,000
2	Inn & Conference Center	O	SL	$25,000,000	$4,000,000
3	South Campus Academic Bldg.	NC	TL	$40,000,000	$38,000,000
4	Wannalancit (includes M2D2)	RV	R	$15,500,000	$15,500,000
5	Civic & Athletic Facilities	O	SL	$10,000,000	$5,000,000
6	Property Acquisitions	O	TL	$20,000,000	$20,000,000
7	Energy & Power Plant Improvements	DM	BI	$40,000,000	$30,000,000
8	Central student service/ academic/admin.	RV	SL	$20,000,000	$15,000,000
9	Near Term Residence Hall	NC	SL	$50,000,000	$40,000,000
10	Capital renewal/deferred maintenance	DM	TL	$86,000,000	$40,000,000
11	Academic & ongoing modernization	RV	TL	$54,000,000	$15,000,000
12	Residential Hall Comprehensive Renewal Program	DM	SL	$40,000,000	$20,000,000
13	Bookstore & dining replacements	RV	SL	$20,000,000	$15,000,000
14	Compliance	CO	BI	$12,000,000	$6,000,000
15	South Campus Garage	NC	BI	$20,000,000	$5,000,000
16	North Campus Academic Quad Renewal (222000 kgsf)	BR	TL	$31,300,000	$11,300,000
17	North Campus, Science & Eng Space	RV	BI	$90,000,000	$20,500,000
18	Additional Residence Hall Beds	NC	SL	$90,000,000	$0
19	Coburn Hall renewal (66 kgsf)	BR	TL	$35,000,000	$4,950,000
20	McGauvran Reconfiguration (42kgsf)	BR	SL	$10,500,000	$1,200,000
21	O'Leary Comprehensive renewal (115kgsf)	BR	SL	$37,375,000	$0
22	Ball Hall Comprehensive Renewal (100 kgsf)	BR	SL	$45,500,000	$0
23	Weed Hall Comprehensive renewal (73 kgsf)	BR	SL	$33,215,000	$0
	SubTotal Designated Projects			***$895,390,000***	***$361,450,000***

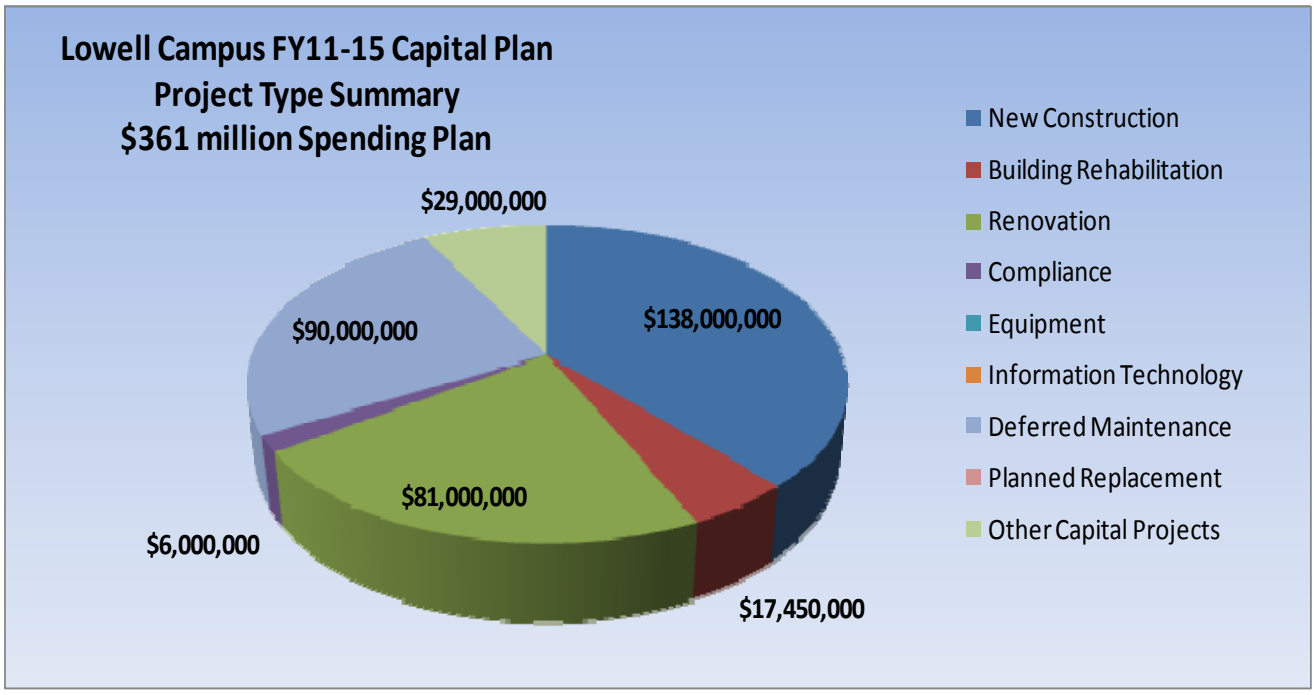
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2010
	Critical Unfunded Projects			
1	Art Department Relocation	RV	TL	$15,000,000
2	Cumnock Hall Renovations	DM	BI	$4,000,000
3	Technology Infrastructure	NC	BI	$10,000,000
4	New Management Bldg	NC	TL	$45,000,000
5	South Dining Replacement	RV	SL	$15,000,000
6	Alumni Hall Renovations	DM	BI	$5,000,000
7	Ames Building Replacement	NC	R	$35,000,000
8	Costello Gym Renovations	PR	SL	$12,000,000
9	Lydon Library Renovations	PR	TL	$18,500,000
10	Dugan Hall Renovations	DM	BI	$5,500,000
11	Durgin Hall Renovations	DM	TL	$12,500,000
12	Engineering Bldg Renovations	DM	TL	$12,500,000
13	Olney Hall Renovations	DM	BI	$16,000,000
14	Olsen Hall Renovations	DM	BI	$17,000,000
15	Pinanski Hall Renovations	DM	BI	$22,000,000
16	North Campus Garage	NC	SL	$15,500,000
	SubTotal Undesignated Projects			***$260,500,000***

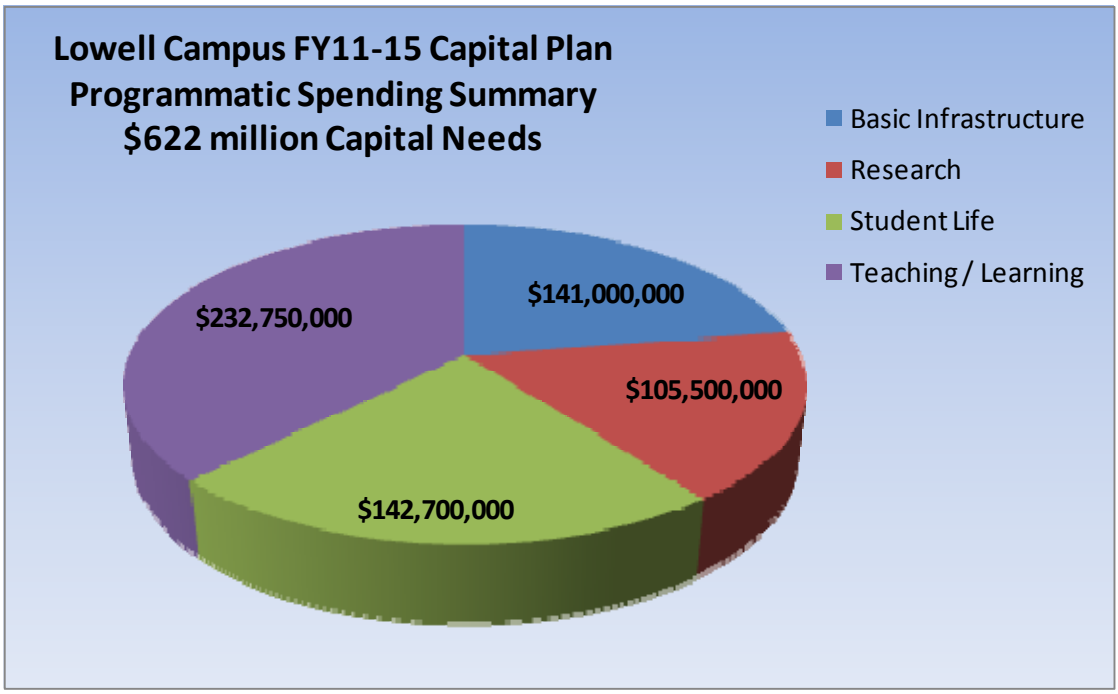
					Total 5-yr spending incl. Undesignated
	Lowell Campus Grand Total FY11-15			***$1,155,890,000***	***$621,950,000***

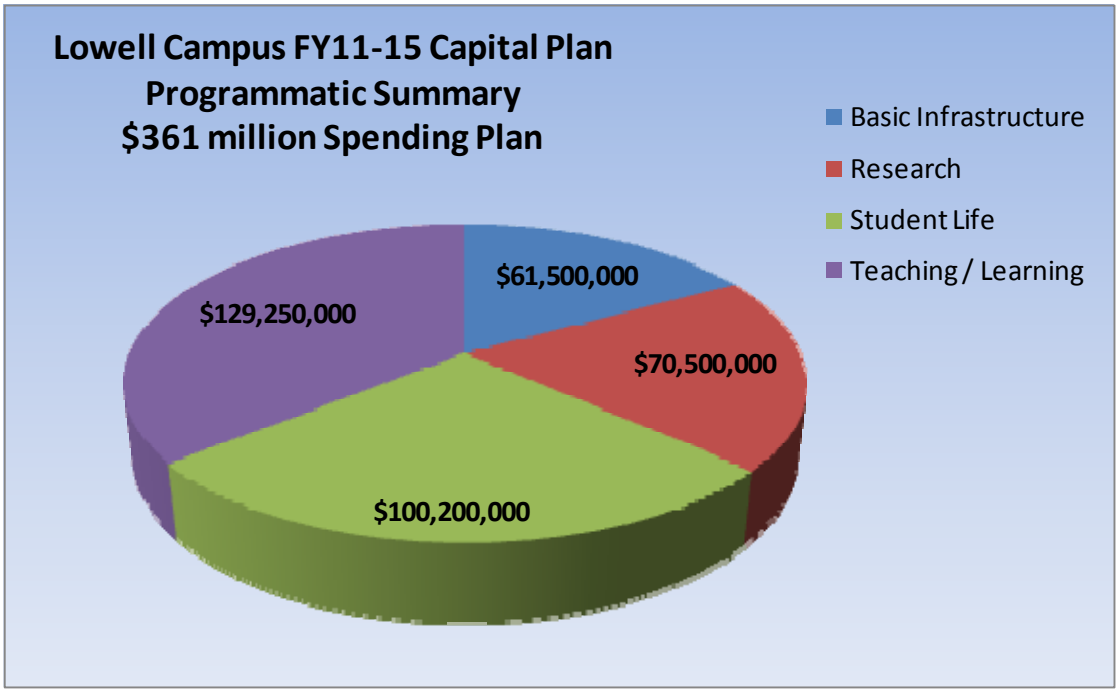

Lowell Campus FY11-15 Capital Plan
Source of Funds
$622 million Capital Needs
$27,000,000
$10,000,000
$168,000,000
$260,500,000
$156,450,000
University Local Funds
Private Fundraising & Federal Funding
University Borrowing
State Capital Support
Currently Unfunded / Undesignated Activity


Lowell Campus FY11-15 Capital Plan
Source of Funds
$361 million Spending Plan
$27,000,000
$10,000,000
$156,450,000
$168,000,000
University Local Funds
Private Fundraising & Federal Funding
University Borrowing
State Capital Support


Lowell Campus FY11-15 Capital Plan
Project Type Summary
$622 million Capital Needs
$30,500,000
$29,000,000
$243,500,000
$184,500,000
$111,000,000
$6,000,000
$17,450,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


Lowell Campus FY11-15 Capital Plan
Project Type Summary
$361 million Spending Plan
$29,000,000
$138,000,000
$90,000,000
$81,000,000
$6,000,000
$17,450,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


Lowell Campus FY11-15 Capital Plan
Programmatic Spending Summary
$622 million Capital Needs
Basic Infrastructure
Research
Student Life
Teaching / Learning
$141,000,000
$105,500,000
$142,700,000
$232,750,000


Lowell Campus FY11-15 Capital Plan
Programmatic Summary
$361 million Spending Plan
Basic Infrastructure
Research
Student Life
Teaching / Learning
$61,500,000
$70,500,000
$100,200,000
$129,250,000

Capital Plan Update
FY2011 to 2015
University of Massachusetts Medical School

Introduction

The University of Massachusetts Medical School (UMMS) 2011 Capital Plan positions the campus to accommodate anticipated future growth while continuing to plan for and fund deferred maintenance and renewal projects. The Capital Plan's overarching goals are to ensure, through strategic development and sustainability initiatives, that campus infrastructure supports institutional missions and attracts and retains outstanding students, faculty and staff.

This Capital Plan includes, among other projects, planning for LEED Silver certification for both the Albert Sherman Center and the Ambulatory Care Center, an environmentally-responsible expansion of the power plant, major improvements to educational facilities which are partially funded by the Higher Education Bond Bill, and renovations of several laboratory floors in the original medical school building to meet current standards. In total, this year's Capital Plan update includes approximately $751 million in funded $860 million in unfunded projects.

In addition to supporting the Commonwealth's Life Sciences Initiative and the University's Board of Trustees priorities, the Worcester campus' Capital Plan aligns with the **Academic Health Sciences Center Strategic Plan**, an approved plan developed in partnership with the school's clinical partner, UMass Memorial Health Care. This strategic plan, currently in an active implementation phase, provides a framework for an ambitious mission to improve the health and well-being of the people of the Commonwealth and the world through pioneering advances in education, research and health care delivery. Goals include:

1. Designing The Future Model of Health Care Delivery;
2. Building The Workforce of the Future;
3. Designing An Ideal Learning Environment;
4. Translating Discovery into Practice;
5. Being A High Performance/High Reliability Organization; and
6. Having A Significant Impact In the World.

The Capital Plan and the projects included therein are reflective of, and help to advance, the aforementioned six strategic goals. Other related projects include the expansion of the Medical School class size, construction of a new parking garage, opening of a new child care center and the renovation and expansion of the Biological Safety Level 3 (BSL) laboratory, a critical research component.

Worcester Campus

The **Albert Sherman Center** will be a state-of-the-art biomedical research and academic center. This significant project reflects the momentum generated by the basic and translational sciences research efforts at UMMS over the past decade and the Medical School's role as the anchor of the region's burgeoning life sciences sector. Through the construction of this 500,000-square-foot building, UMMS will be positioned to continue the substantial growth of its research enterprise, which has experienced a 134 percent increase in total research awards from fiscal year 1998 to fiscal year 2009 and now generates more than $250 million in annual research funding. Moreover, through the development of the Advanced Therapeutics Cluster (ATC), the signature research program to be housed in the Sherman Center, UMMS will have the resources and space to translate the pioneering basic science discoveries of its faculty, including Nobel Laureate Craig Mello, into innovative and effective human therapies.

Although the development of the ATC, consisting of an RNA Therapeutics Institute, a Center for Stem Cell Biology and Regenerative Medicine and a Gene Therapy Center, continues to serve as the catalyst for the Albert Sherman Center, other critical campus needs are being addressed through this expansion as well. The Sherman Center will include modern, innovative and flexible educational spaces to accommodate the school's re-design of its curriculum. Also, campus-life spaces, such as student-life themed areas, an auditorium and conference rooms, which currently are either inadequate or do not exist on campus will have prominence in the Sherman Center.

As a result of the $90 million appropriation from the Commonwealth to support this project, UMMS has developed a long-range financial plan that ensures completion of the Sherman Center, support for its operating costs and the overall financial viability of the Medical School. The estimated $400 million total shared investment will contribute substantially to the Medical School's efforts to realize its ambitious vision, as well as further strengthen the school's role as anchor of Worcester County's life sciences industry and as a driver of economic development throughout the region. According to an analysis undertaken by the Donahue Institute, the Sherman Center project is expected to generate over $1billion in economic activity during the first five years of the project and hundreds of millions more annually thereafter.

The Capital Plan is substantiated by three key studies: the Campus Master Plan developed by Tsoi Kobus in 2005; a VFA Facility Condition Assessment and the van Zelm Engineering Power Plant Master Plan, both of which were completed in 2006.

The **Campus Master Plan** was completed by Tsoi Kobus under a DCAM contract in 2005. The plan provides for a phased construction process to meet the organizational needs of UMMS, the clinical system and Commonwealth Medicine. The plan addresses infrastructure demands, enhances collaboration among the many constituencies within the campus community and, over time, transitions the site into a cross-disciplinary, full-service academic campus, while assuring sustainable design principles, accessibility and off-campus synergies. In addition, the plan has built-in flexibility to accommodate changes in medical education and the Medical School's new curriculum, translational and clinical research efforts and emerging technologies. Furthermore, land acquisition has been added to this year's Capital Plan to more effectively align it with the Campus Master Plan.

VFA completed a **Facility Condition Assessment** in May 2006 and identified more than $70 million in required facility improvements for the Medical School. In addition, the list of requirements for the UMass Memorial Medical Center totaled $42 million. The condition assessment team inspected installed equipment, surveyed the facility and identified deferred maintenance requirements. Each requirement was documented with detailed cost estimates, photos and narratives, after which they were ranked. The plan identified more than $19 million in currently critical or potentially critical requirements, all of which should be addressed within the next several years. The largest and most immediate deferred maintenance project is the replacement of thirty air handling units throughout the Medical School. Replacing these units will improve reliability and energy efficiency and provide enhanced environmental control of research laboratories, teaching spaces and offices. An update of the VFA Facility Condition Assessment is planned for late 2010.

Also as previously mentioned, UMMS completed a **Power Plant Master Plan** in 2006. The UMMS Power Plant is an integral component of the campus and provides all steam, chilled water, normal power and emergency power to the school and the 400-bed acute care hospital and trauma center. Van Zelm, Heywood and Shadford, Inc. performed the study. The recommendations addressed near-term reliability and plant redundancy issues, as well as longer-range capacity requirements consistent with the Campus Master Plan. The importance of effective operation and reliability of the Power Plant cannot be overstated: it is critical to the mission-based activity occurring daily on the campus.

The van Zelm study supports a $50 million program to address the near-term and long-term recommendations. The project will add required chiller capacity and redundancy, cooling tower capacity and additional emergency power generation. The project is aligned with Governor Patrick's 2007 Energy Policy, including the promotion of distributed generation, which improves energy efficiency and reduces greenhouse gas emissions. The Power Plant expansion is crucial for this year, as both the new Ambulatory Care Center and the Albert Sherman Center will be supplied by the Power Plant.

UMMS' ambitious **sustainability objectives** are reflected throughout the Campus Master Plan, focusing on operational efficiency and new project identification, development and execution. The $30 million air handling unit project will replace more than thirty antiquated units with new high efficiency units, improving energy utilization and reducing the campus carbon footprint. The co-generation system in the Power Plant dramatically reduces energy use and the associated carbon footprint, and by providing more than fifty percent of the electrical power to the campus as a distributed generation site, the Power Plant saves more than thirty percent of the typical electrical loss that occurs as electricity is transmitted through power lines. The Power Plant Expansion project's increased energy efficiency may surpass seventy percent, further reducing the campus carbon footprint and providing a cost effective solution to increased energy demands.

The $120 million, 258,000 square foot **Ambulatory Care Center (ACC)** is scheduled to open in August of this year. It has been designed and constructed to meet the new state energy code and will be seeking LEED Silver certification. The ACC's innovative building design will provide significant new space that seamlessly integrates clinical care, research and education. Already the location for the newly established Department in Quantitative Health Sciences, the ACC will be the new home for the Centers of Excellence for Musculoskeletal Disease, Cancer, Diabetes and Endocrinology, and Heart and Vascular Disease. Also, the building will house a Radiology Center with MRI, CT, PET and DR equipment.

Jamaica Plain Campus

The University of Massachusetts Medical School's Jamaica Plain Campus consists of three buildings on approximately ten acres of land. The buildings have multiple tenants, with MassBiologics and the Department of Public Health's State Laboratory Institute serving as the lead occupants. The buildings range in age from thirty-three to over a hundred years old, and few capital improvements have been made to the buildings or the site over the years. The most pressing problem at this time is the lack of an adequate HVAC/ventilation system to support current needs. The outdated HVAC/ventilation system is overwhelmed by new laboratory technologies that generate significant heat load, and exacerbates HVAC problems in poorly ventilated laboratory spaces. Beyond the HVAC/ventilation system, there are a variety of problems that necessitate corrective action to maintain the integrity of the buildings, meet the needs of the occupants, allow for reliable and efficient operation and comply with current building codes and industry standards.

MassBiologics, as it is engaged in the development and manufacturing of vaccines and other biologic products, including monoclonal antibodies, requires FDA licensure. Continued FDA licensing is contingent upon compliance with "current Good Manufacturing Practices," a set of industry standards for the operation and maintenance of biologics manufacturing facilities.

The State Laboratory Institute, a Massachusetts Department of Public Health operation housed at the Jamaica Plain campus, is the only laboratory of its kind in the Commonwealth. The State Lab is responsible for the early detection and testing associated with outbreaks of infectious diseases, such as rabies, HIV, food borne illnesses, H1N1 flu, West Nile Virus and Eastern Equine Encephalitis. The $3.5 million **HVAC Upgrade Project** is critical to the functionality of these DPH laboratories.

Shriver Center

The University of Massachusetts Medical School's Shriver Center in Waltham consists of two buildings on the grounds of the Fernald School. The Shriver Center conducts research in developmental disabilities in children and adults. The buildings at the Shriver Center, similar to those in Jamaica Plan, are more than thirty-five years old and have not benefitted from any substantial capital improvements. A building evaluation was conducted by Hoskins Scott & Partners before the Medical School took control of the facility in 2001, and deficiencies that were serious enough to jeopardize the safe operation of the buildings were addressed at that time. Laboratory air handling systems were improved to provide adequate ventilation, and the animal facility was brought up to accreditation standards.

There remain a number of issues that affect the integrity of the Shriver Center buildings and the reliability and operating efficiency of the building systems, including the building envelopes. A request of more than $1.9 million for improvements to the building roofs, façade and windows has been made. All of the Shriver Center's steam is currently supplied by the Fernald School Central Power Plant; however, this power plant is scheduled to close and as a consequence, the Medical School will be required to install a boiler system at the Shriver Center.

WCCC Properties

Worcester City Campus Corporation has properties on the Medical School campus and in Shrewsbury, Mattapan and Auburn. These assets include office buildings, laboratory facilities and parking garages. In 2007, the South Street property in Shrewsbury was purchased and increased the Medical School's space inventory by more than 670,000 square feet. The UMass President's Office, Commonwealth Medicine, and the Medical School's Human Resources, Information Services and Development Offices are all occupants of this facility. Several projects added to the capital plan reflect renovation for office use and deferred maintenance at the South Street facility. A majority of the capital funds identified in the WCCC plan are intended for Mattapan, where MassBiologics conducts many of its operations. At the Mattapan site, MassBiologics has recently completed construction of a new R&D and Administrative Facility and a future Vaccine Production and Warehouse facility is in the early planning stages.

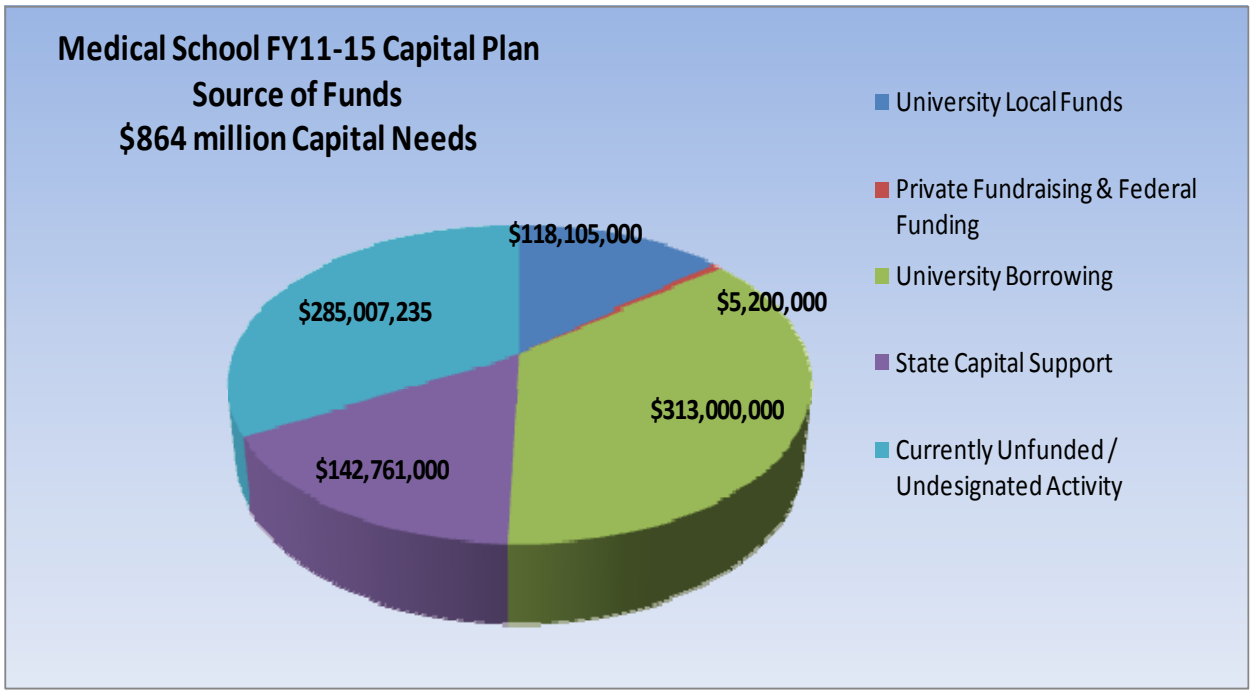
University of Massachusetts FY11 Capital Plan Update
Medical School Projects

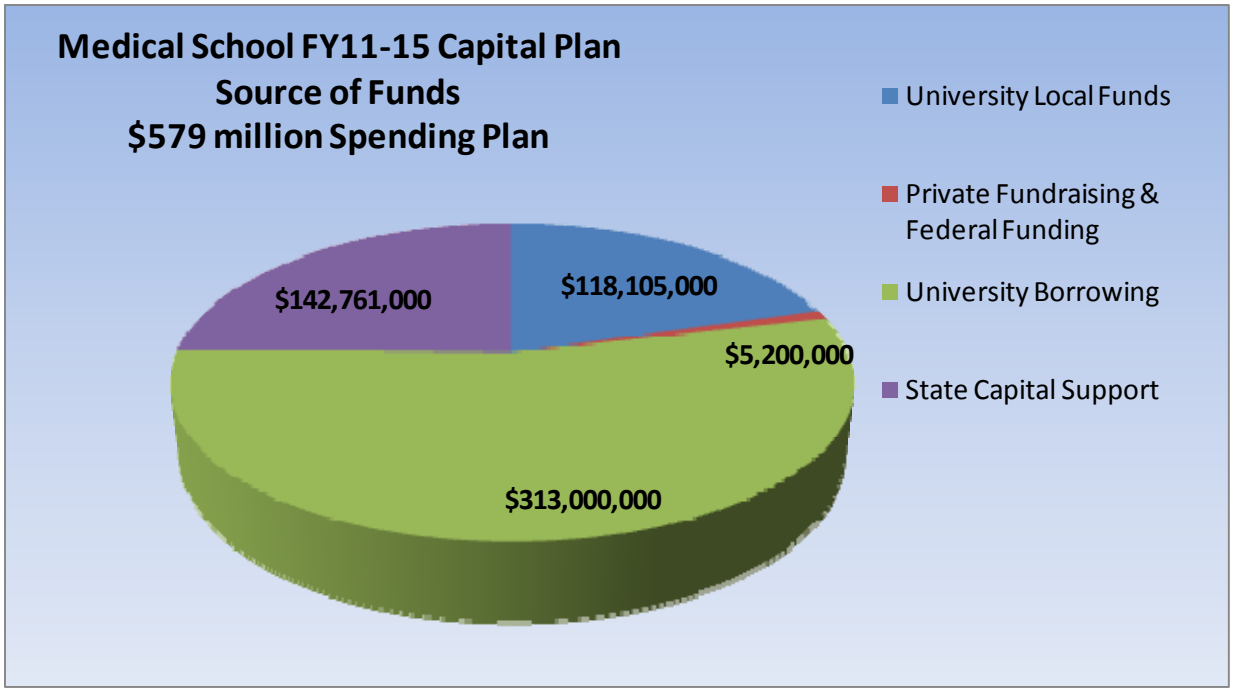
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2010	Five Year Spending Anticipated FY11-15 Cash Flow
	Designated Projects				
	Worcester Campus Projects				
1	Power Plant Expansion	NC	BI	$50,000,000	$50,000,000
2	Albert Sherman Center	NC	TL	$330,000,000	$330,000,000
3	Chilled Water/ Steam Loop on Campus	NC	BI	$13,000,000	$2,000,000
4	New NW Parking Garage	NC	BI	$40,000,000	$40,000,000
5	South St. Data Center - Phase 2	IT	BI	$4,000,000	$4,000,000
6	Class Size Increase Initiative	RV	TL	$7,150,000	$3,950,000
7	School 4th fl Lab Renovations - Phase 1	RV	R	$10,000,000	$10,000,000
8	School HVAC Upgrades/Replacements	DM	BI	$30,100,000	$30,100,000
9	Construct Child Care Center	NC	BI	$2,700,000	$2,700,000
10	Advanced Education and Clinical Practice Center (ACC)	NC	TL	$120,000,000	$25,000,000
11	Renovate and Expand BL3 Suite - 7th Fl	RV	R	$5,500,000	$5,500,000
12	School Roof Replacements	DM	TL	$1,365,000	$1,365,000
13	AQA Terminal Box Improvements	DM	R	$3,150,000	$600,000
14	School Stairwell Fire and Safety Improvements	C	BI	$2,400,000	$0
15	Construct New Storage Warehouse	NC	BI	$5,000,000	$0
16	Balance of Plant Controls (BOP) Upgrade	RV	BI	$2,257,500	$0
17	Renovate Labs to Offices - Backfill Project	RV	TL	$4,200,000	$0
18	Replace Water Filters	DM	BI	$500,000	$500,000
19	Replace the Acid Neutralization Tanks	DM	BI	$525,000	$525,000
20	Land Acquisition per Master Plan	O	BI	$75,000,000	$0
21	South Road and Lake Ave Interchange Modifications	DM	BI	$735,000	$0
22	Replace School Electric Substations	DM	BI	$9,900,000	$0
23	ATC Clinical Development Center (cGMP)	NC	BI	$10,000,000	$0
24	UMMS Residence Deferred Maintenance	DM	BI	$550,000	$550,000
25	North Road Pavement, Sidewalks and Lighting	DM	BI	$500,000	$0
26	Parking Lot Maintenance - Main Campus	DM	BI	$840,000	$840,000
27	West Parking Garage Repairs	DM	BI	$10,000,000	$10,000,000
28	LP Boiler Re-tubing	DM	BI	$4,000,000	$0
29	Power Plant Governor PLC	RV	BI	$1,200,000	$0
30	Deferred Maintenance List - Priority 2	DM	BI	$4,500,000	$0
31	School Interior Renovations	RV	TL	$4,000,000	$0
32	School Building Retro Commissioning, LEED EB	RV	TL	$3,000,000	$0
33	Steam Chiller 2 Retrofits	DM	BI	$500,000	$0
34	Chair recruits	RV	TL	$6,000,000	$4,000,000
35	Campus Landscape Improvements	NC	BI	$1,500,000	$0
36	Network Infrastructure	IT	BI	$10,000,000	$5,000,000
37	Faculty Recruits	RV	R	$10,200,000	$7,200,000
38	Construct New Freezer Farm	RV	R	$2,000,000	$0
39	Departmental equipment purchases	E	R	$10,000,000	$5,000,000
40	Miscellaneous Roadway Projects	DM	BI	$1,000,000	$0
41	Deferred Maintenance List - Priority 3	DM	BI	$20,000,000	$0
42	Master Plan - School Phases I-3	NC	R	$93,000,000	$0
43	BNRI Upgrades	DM	R	$1,500,000	$800,000
44	Deferred Maintenance List - Priority 4, 5	DM	BI	$4,000,000	$0
	Jamaica Plain Campus Projects				
JP - 1	Electrical service upgrade	CO	BI	$7,245,000	$7,245,000
JP - 2	Biolab roof replacement	DM	BI	$1,811,250	$0
JP - 3	HVAC & Power Plant Upgrades	DM	BI	$18,000,000	$0
JP - 4	Building & Energy Management Systems	CO	BI	$1,138,672	$0
JP - 5	Architectural, Roofing and Site Upgrades	DM	BI	$2,415,000	$0
JP - 6	Security Improvements	DM	BI	$875,438	$0
JP - 7	Tower Exhaust Fan Replacement	DM	BI	$905,625	$0
JP - 8	JP Campus Master Plan Study	DM	BI	$603,750	$0
JP - 9	Miscellaneous Projects - Jamaica Plain	RV	BI	$2,415,000	$0

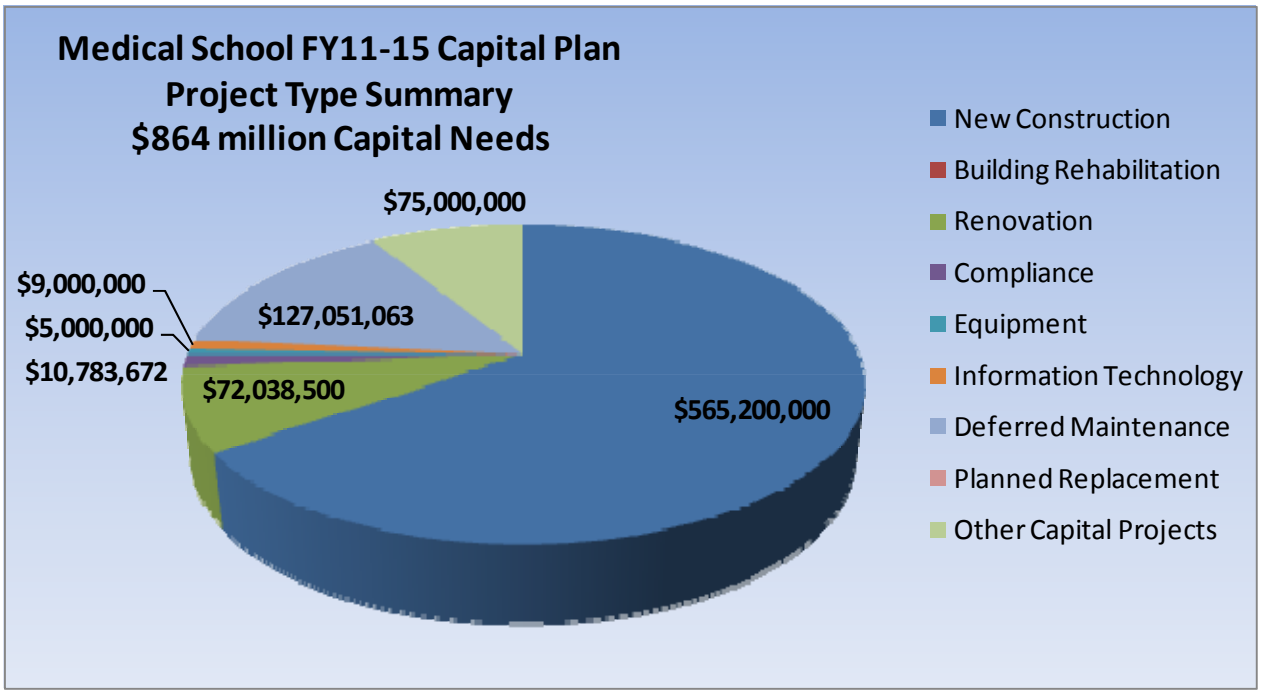
	Shriver Campus Projects				
S -1	Renovations	R	BI	$6,791,000	$6,791,000
S -2	Demolition of Tower	DM	BI	$1,000,000	$1,000,000
S -3	Modular Research Buildings	NC	BI	$6,000,000	$6,000,000
	Worcester City Campus Corporation Properties				
WCCC - 1	MBL- Mattapan New Vaccine Production & Warehouse	NC	R	$35,000,000	$0
WCCC - 2	South Street Renovations	RV	BI	$7,000,000	$7,000,000
WCCC - 3	South St Deferred Maintenance	DM	BI	$7,875,000	$7,875,000
WCCC - 4	South St. Bldg 2 Demo/ Renovation	RV	BI	$5,000,000	
WCCC - 5	Chang Renovations	RV	BI	$525,000	$525,000
WCCC - 6	Misc Renovations WCCC	RV	BI	$3,000,000	$3,000,000
	SubTotal Designated Projects			***$1,023,373,235***	***$579,066,000***

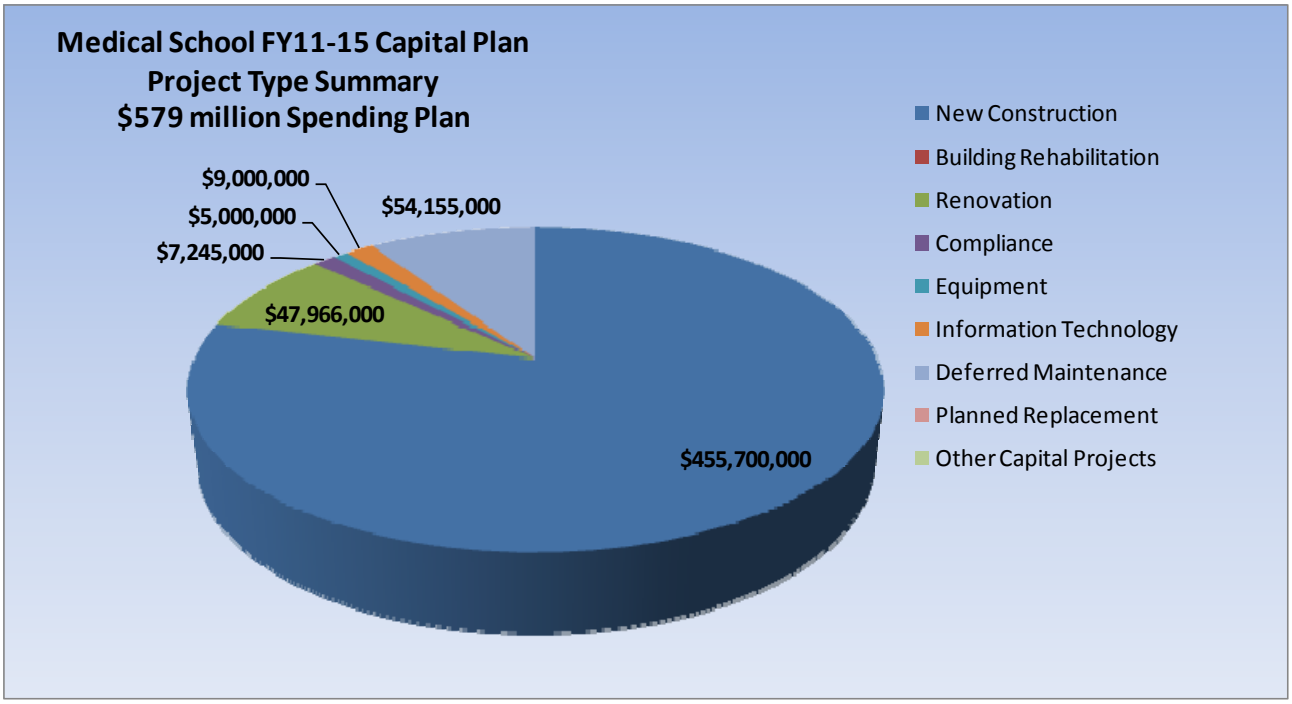
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2010
	Critical Unfunded Projects			
13	AQA Terminal Box Improvements	DM	R	$3,150,000
14	School Stairwell Fire and Safety Improvements	C	BI	$2,400,000
15	Construct New Storage Warehouse	NC	BI	$5,000,000
16	Balance of Plant Controls (BOP) Upgrade	RV	BI	$2,257,500
17	Renovate Labs to Offices - Backfill Project	RV	TL	$4,200,000
20	Land Acquisition per Master Plan	O	BI	$75,000,000
21	South Road and Lake Ave Interchange Modifications	DM	BI	$735,000
22	Replace School Electric Substations	DM	BI	$9,900,000
23	ATC Clinical Development Center (cGMP)	NC	BI	$10,000,000
25	North Road Pavement, Sidewalks and Lighting	DM	BI	$500,000
28	LP Boiler Re-tubing	DM	BI	$4,000,000
29	Power Plant Governor PLC	RV	BI	$1,200,000
30	Deferred Maintenance List - Priority 2	DM	BI	$4,500,000
31	School Interior Renovations	RV	TL	$4,000,000
32	School Building Retro Commissioning, LEED EB	RV	TL	$3,000,000
33	Steam Chiller 2 Retrofits	DM	BI	$500,000
35	Campus Landscape Improvements	NC	BI	$1,500,000
38	Construct New Freezer Farm	RV	R	$2,000,000
40	Miscellaneous Roadway Projects	DM	BI	$1,000,000
41	Deferred Maintenance List - Priority 3	DM	BI	$20,000,000
42	Master Plan - School Phases I - 3	NC	R	$93,000,000
44	Deferred Maintenance List - Priority 4, 5	DM	BI	$4,000,000
WCCC - 4	South St. Bldg 2 Demo/ Renovation	RV	BI	$5,000,000
JP - 2	Biolab roof replacement	DM	BI	$1,811,250
JP -3	HVAC & Power Plant Upgrades	DM	BI	$18,000,000
JP - 4	Building & Energy Management Systems	CO	BI	$1,138,672
JP - 5	Architectural, Roofing and Site Upgrades	DM	BI	$2,415,000
JP - 6	Security Improvements	DM	BI	$875,438
JP - 7	Tower Exhaust Fan Replacement	DM	BI	$905,625
JP - 8	JP Campus Master Plan Study	DM	BI	$603,750
JP - 9	Miscellaneous Projects - Jamaica Plain	RV	BI	$2,415,000
	SubTotal Undesignated Projects			***$285,007,235***

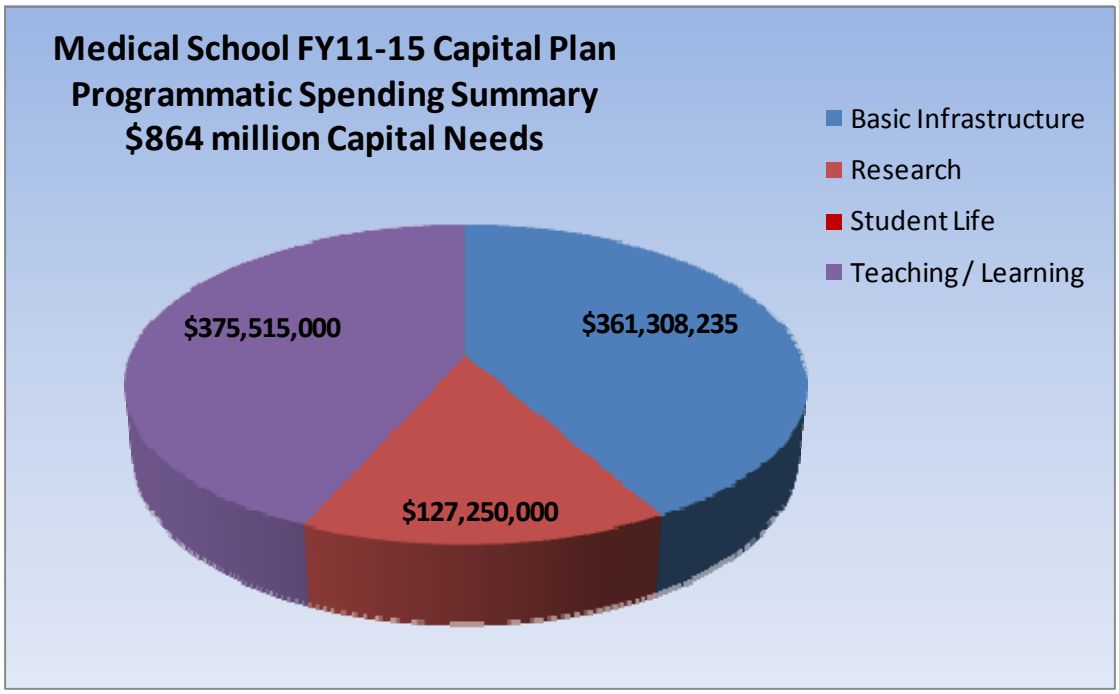
		Total 5-yr spending incl. Undesignated
Worcester Campus Grand Total FY11-15	***$1,308,380,470***	***$864,073,235***

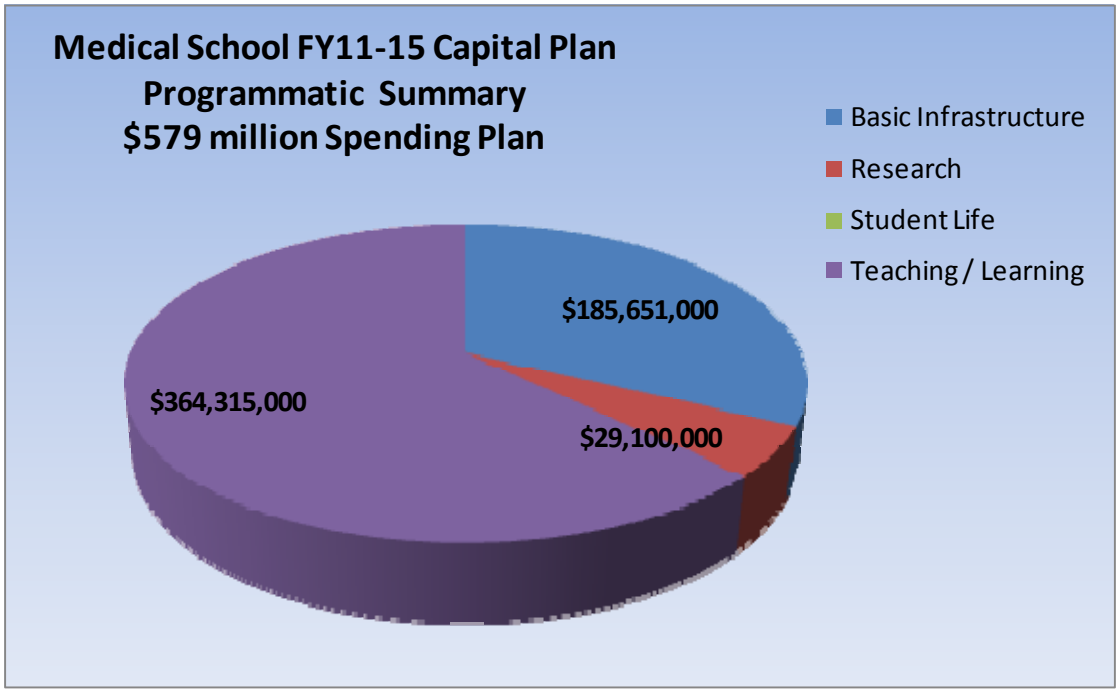

Medical School FY11-15 Capital Plan
Source of Funds
$864 million Capital Needs
$118,105,000
$5,200,000
$313,000,000
$142,761,000
$285,007,235
University Local Funds
Private Fundraising & Federal Funding
University Borrowing
State Capital Support
Currently Unfunded / Undesignated Activity


Medical School FY11-15 Capital Plan
Source of Funds
$579 million Spending Plan
$118,105,000
$5,200,000
$313,000,000
$142,761,000
University Local Funds
Private Fundraising & Federal Funding
University Borrowing
State Capital Support


Medical School FY11-15 Capital Plan
Project Type Summary
$864 million Capital Needs
$75,000,000
$9,000,000
$5,000,000
$10,783,672
$127,051,063
$72,038,500
$565,200,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


Medical School FY11-15 Capital Plan
Project Type Summary
$579 million Spending Plan
$9,000,000
$5,000,000
$7,245,000
$54,155,000
$47,966,000
$455,700,000
New Construction
Building Rehabilitation
Renovation
Compliance
Equipment
Information Technology
Deferred Maintenance
Planned Replacement
Other Capital Projects


Medical School FY11-15 Capital Plan
Programmatic Spending Summary
$864 million Capital Needs
Basic Infrastructure
Research
Student Life
Teaching / Learning
$375,515,000
$361,308,235
$127,250,000


Medical School FY11-15 Capital Plan
Programmatic Summary
$579 million Spending Plan
Basic Infrastructure
Research
Student Life
Teaching / Learning
$185,651,000
$364,315,000
$29,100,000

Appendix A
List of New Projects Requested for Board of Trustee Approval
FY2011 to 2015 University Capital Plan

Trustee Policy T92-122 requires that all new construction or renovation projects with a total project cost exceeding $1,000,000 dollars shall be approved by the Board of Trustees. The following list includes all new projects proposed for approval by the Board as part of the FY2011-2015 update to the University's Capital Plan.

Table 1 Priority #	Project Name	Project Type	Program Type	Cost Estimate August 2010
Amherst Campus				
64	Hills relocations	RV	TL	$4,000,000
65	Team Learning Classrooms	RV	TL	$1,500,000
67	Franklin Dining Commons structural and MEP	RV	BI	$5,000,000
133	Morrill I Auditorium	RV	TL	$2,000,000
134	E-Lab II renovations	RV	TL	$4,000,000
136	French, Fernald and Clark renovations	RV	TL	$3,000,000
137	Stockbridge Hall complete fire suppression	CO	TL	$12,500,000
138	Conte Polymer windows	DM	BI	$5,000,000
139	Research Affairs heat pumps, MEP	DM	BI	$1,400,000
140	ISOM deferred maintenance	DM	BI	$6,500,000
141	Wilder deferred maintenance	DM	BI	$1,000,000
142	ISOM renovations & addition	NC	TL	$40,000,000
149	Football support facility	NC	BI	$12,000,000
150	Softball Facility Lighting	NC	BI	$1,100,000
151	Rudd Field Support Building	NC	BI	$10,000,000
152	Recreation Center Phase II	NC	SL	$32,000,000
	Amherst total			**$141,000,000**
Boston Campus				
BI -01.2	Construct New Structure for Primary Electrical Switchgear	NC	BI	$3,000,000
M - 02.3	Master Plan Phase I: Relocate Campus Utility Systems from Substructure (Phase II)	NC	BI	$26,250,000
BI-15	Saltwater Pump House: Mechanical System Upgrades and Savin Hill Cove Dredging	DM	BI	$2,000,000
BI-16	Quinn Administration Building: Fire Alarm System	CO	BI	$1,200,000
M -01.2	Master Plan Phase I: Utility Plant System Expansion and Upgrades	NC	BI	$3,000,000
M -05	Master Plan Phase I: Study Substructure and Science Center Demolition	O	BI	$2,500,000
M- 16	Master Plan Phase I: Purchase or Lease Additional Swing Space	O	TL	$2,500,000
M - 05.2	Master Plan Phase I: Construct new campus Greenhouse	NC	R	$5,000,000
M- 05.3	Master Plan Phase I: Relocate University Data Center	BR	BI	$3,000,000
M -14	Master Plan Phase I: Construct new pool facility	NC	SL	$10,000,000
M -06	Master Plan Phase I: Construct new Trigeneration Facility	NC	BI	$25,000,000
M - 15	Master Plan Phase I: New public art for Campus Green	O	SL	$1,000,000
TR - 03	Relocation (Partial) of College of Nursing and Health Sciences	RV	TL	$1,500,000
TR - 01	Healey Library: Renovate space to create 3 new classrooms on the 4th Floor	RV	TL	$1,000,000
	Boston total			**$86,950,000**

Table 1 Priority #	Project Name	Project Type	Program Type	Cost Estimate August 2010
Dartmouth Campus				
16	New Academic Building	NC	TL	$55,000,000
	Dartmouth total			**$55,000,000**
Lowell Campus				
8	Campus Student Service, Academic & Admin. Center	TL/SL	R	$20,000,000
9	Capital renewal/deferred maintenance	TL	DM	$86,000,000
12	Bookstore & dining replacements (priority 13 last FY)	SL	RV	$20,000,000
13	Residential Hall Comprehensive Renewal Program (priority 13 last FY)	SL	DM	$40,000,000
14	North Campus Science & Engineering Facilities	TL/R	NC/RV	$90,000,000
	Lowell total			**$256,000,000**
Medical School				
7	School 4th fl Lab Renovations - Phase 1	RV	R	$10,000,000
20	Land Acquisition per Master Plan	O	BI	$75,000,000
24	UMMS Residence Deferred Maintenance	DM	BI	$550,000
S - 1	Renovations	R	BI	$6,791,000
S - 2	Demolition of Tower	DM	BI	$1,000,000
S -3	Modular Research Buildings	NC	BI	$6,000,000
WCCC - 4	South St. Bldg 2 Demo/ Renovation	RV	BI	$5,000,000
	Worcester total			**$104,341,000**
	Total New Projects			**$643,291,000**

Appendix B

Change in Estimates of Total Project Cost Greater then 20%
For Projects Previously Approved by the Board of Trustees

As detailed in the attached table, the total cost of University capital projects can change for various reasons, including scope expansion, planning adjustments, price escalation, revised guidance provided by oversight agencies, or more informed estimates provided by design contractors Of the total number of capital projects included in this year's University's capital plan update, only 11 of the 417 require a change i the total project cost estimate.

Campus Priority #	Project Name	Initial TPC	Revised TPC	% Increase	Explanation for Change in Cost
	Amherst Campus				
24	Stockbridge Hall Fire Suppression and Fire Alarms	$1,355,000	$2,120,000	56%	Increased scope for collateral site work, auditorium egress, fire separation, standby power, emergency lighting, exit signage and historical plaster restoration.
	Boston Campus				
BI-01	Master Plan Phase I: Relocate Campus Utility Systems from Substructure (Phase I)	$43,000,000	$62,125,000	44%	The updated estimated TPC for this project is a result of the completion of a comprehensive Utility Master Plan for UMass Boston. The Utility Master Plan indicates the need for a larger, pile supported, utility duct bank system.
M - 02.2	Master Plan Phase I: Relocation and Reconfiguration of University Drive North and University Drive West	$7,000,000	$16,000,000	129%	The scope of this project has been expanded to include both the west and north portions of University Drive in order to allow more traffic to access the campus via Mount Vernon Street and provide direct access to the Edward M. Kennedy Institute.
	Dartmouth Campus				
3	Biomanufacturing Building	$10,000,000	$26,000,000	160%	The project scope increased by the inclusion of education and business/research incubator capabilities.
4	SMAST	$20,000,000	$48,000,000	140%	Project increased as a result of an in-house feasibility study that was conducted in FY10. The existing program is expected to double from its current size greatly increasing graduate studies and research capabilities.
5	Classroom and Laboratory Upgrades	$7,400,000	$11,400,000	54%	This project represents the combination of two previously approved projects identified as "Classroom Upgrades and Learning Space Improvements" and "Student Lab Program Enhancements" in the FY'10 Capital Plan. The total cost is the combined value of the two projects and does not represent a net increase to the total Capital Plan.
	Medical School				
4	New NW Parking Garage	$28,000,000	$40,000,000	30%	Land acquisition (Bio 6) and current estimate updates on structure/land development.
11	Renovate and Expand BL3 Suite - 7th Fl	$3,000,000	$5,500,000	45%	The Medical School received a grant from the National Institute of Health to fund this project and expand the scope.
27	West Parking Garage Repairs	$900,000	$10,000,000	91%	A recent study found that the garage is in need of significant repairs that will be phased over multiple years.
43	BNRI Upgrades	$1,000,000	$1,500,000	33%	Anticipated infrastructure upgrades to CCNI required if grant is awarded for additional MRI unit.
JP - 3	Jamaica Plain: HVAC & Power Plant Upgrades	$3,450,000	$18,000,000	81%	A recent evaluation found that the HVAC system and Power Plant are in need of significant repairs in order to continue operation.