

FY22 – FY26 Capital Plan

Administration & Finance Committee

September 29, 2021



University of Massachusetts

Amherst • Boston • Dartmouth • Lowell • Medical School • UMassOnline

Agenda

- Capital Planning Context / Background
- Capital Plan Summary
- Appendices
 - Capital Policy Overview
 - Dashboard Data
 - Addressing Deferred Maintenance: Keep Up Tracking
 - Conceptual (Not Yet Authorized) Projects
 - Sustainability
 - Real Estate & Asset Management
 - Campus Data

Key Takeaways

- University Capital Plan totals 101 projects and \$1.86 billion with 79% funded by University resources including debt and other operating funds
- Commercial paper used to bridge to next long-term borrowing expected early 2022
- Borrowing to complete the plan will increase debt burden toward 8% (currently 6.4%) and decrease debt coverage (currently 2.0); rating agencies will note these trends
- Deferred maintenance totals \$4.0 billion; authorized projects will continue to address backlog, but a strategy and significant investments are needed
- Continued advocacy for State resources; potential for Federal infrastructure funds to support conceptual projects and deferred maintenance

Capital Planning: Context / Background

University Capital: by the Numbers

With 375 buildings and 28.3 million gross square feet of space, the University has a complex and extensive real estate profile that needs to be actively managed.



\$4.0 billion deferred maintenance backlog



About **92,000 students, staff, and faculty**



28.3M total GSF across the university



3,677 maintained acres



375 buildings across 5 campuses



\$14.4 billion replacement value

Debt Facts

University credit rating:

Aa2 stable (Moody's), AA-negative (S&P), AA stable (Fitch)

Total debt outstanding:

\$3.0 billion *as of 6/30/21*

Annual debt service:

\$221 million *FY22 budget*

Debt service burden:

6.4% (peers are under 5%) *as of 6/30/20*

Financial leverage ratio:

0.53 (spendable cash/total debt) (below the peer median of 1.35, indicating the University has higher total debt in relation to peers) *as of 6/30/20*

Capital Plan

What is it?

Comprehensive, five-year plan of capital investment based on financial planning, policy priorities and strategic plans to ensure effective investment in the future and management of capital assets

What is included?

- ✓ Prioritized list of projects approved by the President and Board of Trustees
- ✓ Connection to strategic plans
- ✓ Funding sources of each project
- ✓ Impacts on deferred maintenance and key ratios

When do we do it?

Developed and presented to the Board of Trustees biennially; updates prepared and presented quarterly

Why do we do it?

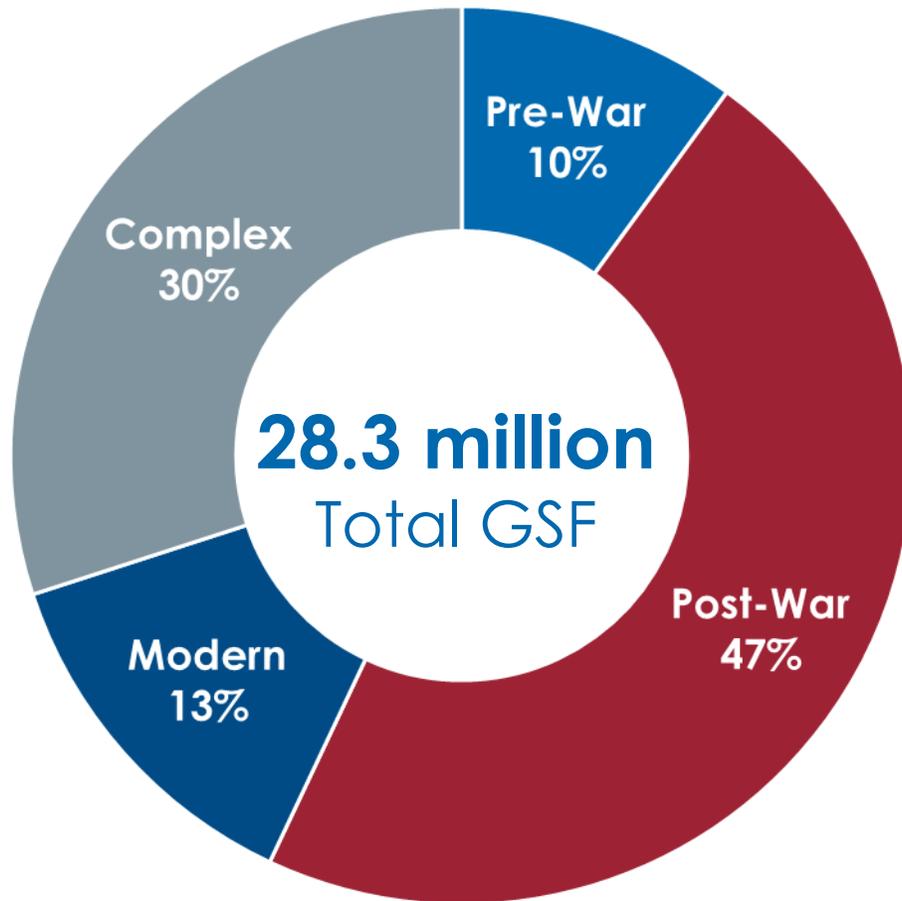
- ✓ To identify and prioritize capital needs
- ✓ To evaluate available sources of funding
- ✓ To understand the financial impact and timing of needs in relation to the financial forecast
- ✓ To promote effective communication with stakeholders on capital needs and borrowing plans

Who is involved?

- ✓ President's Office – facilitates development of the capital plan, quarterly reporting and financial forecast; provides assumptions and conducts analysis to support consistent and realistic planning
- ✓ Campuses - utilize master and strategic plans to develop a capital program that reflects the strategic priorities, deferred maintenance needs and unique needs for that campus
- ✓ UMass Building Authority (UMBA) – serves the University through the planning, financing, design, construction, acquisition, capital maintenance, and replacement of University buildings, infrastructure, and real estate

UMass Building Age

60% of University built in eras requiring higher levels of care and maintenance today

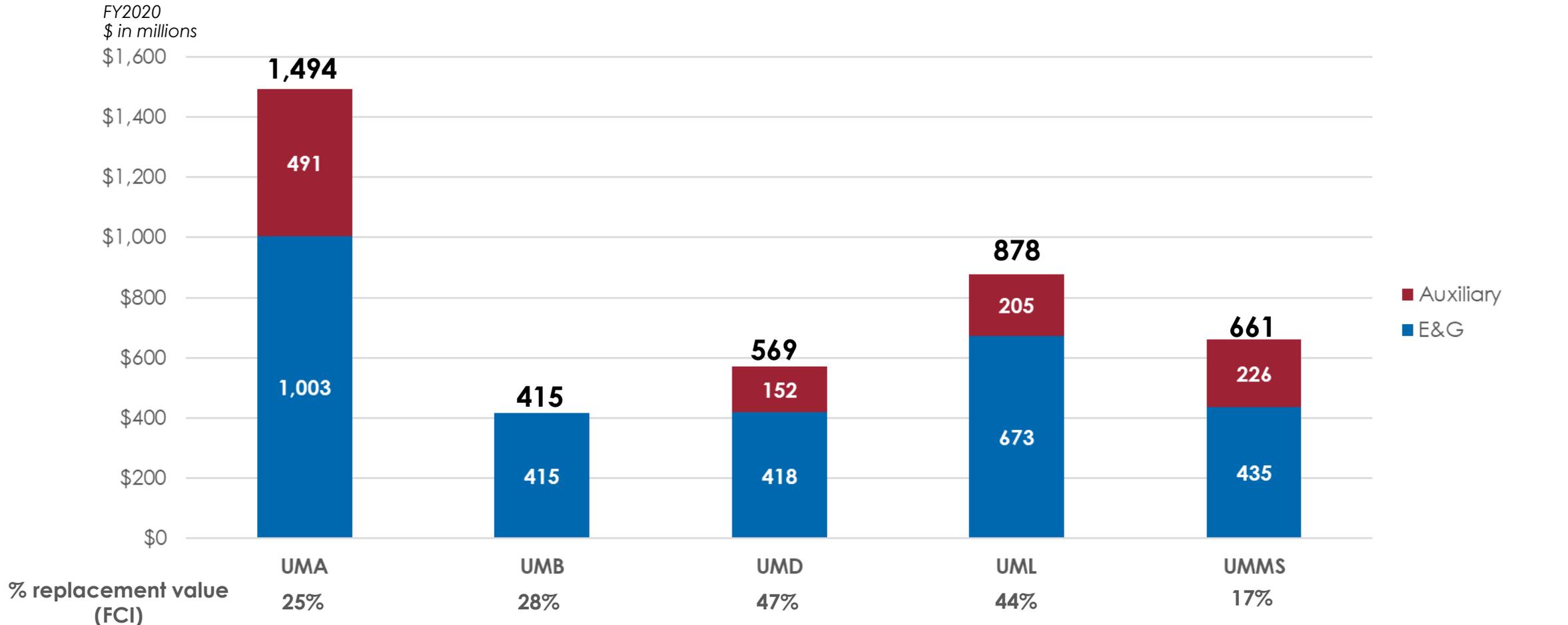


Construction Eras

- Pre-War (pre-1951): durable construction, older but lasts longer
- Post-War (1951-1975): lower quality, needs more repairs & renovation
- Modern (1975-1990): quick flash construction, low quality components
- Complex (post-1990): technically complex, higher quality, more expensive to maintain or repair

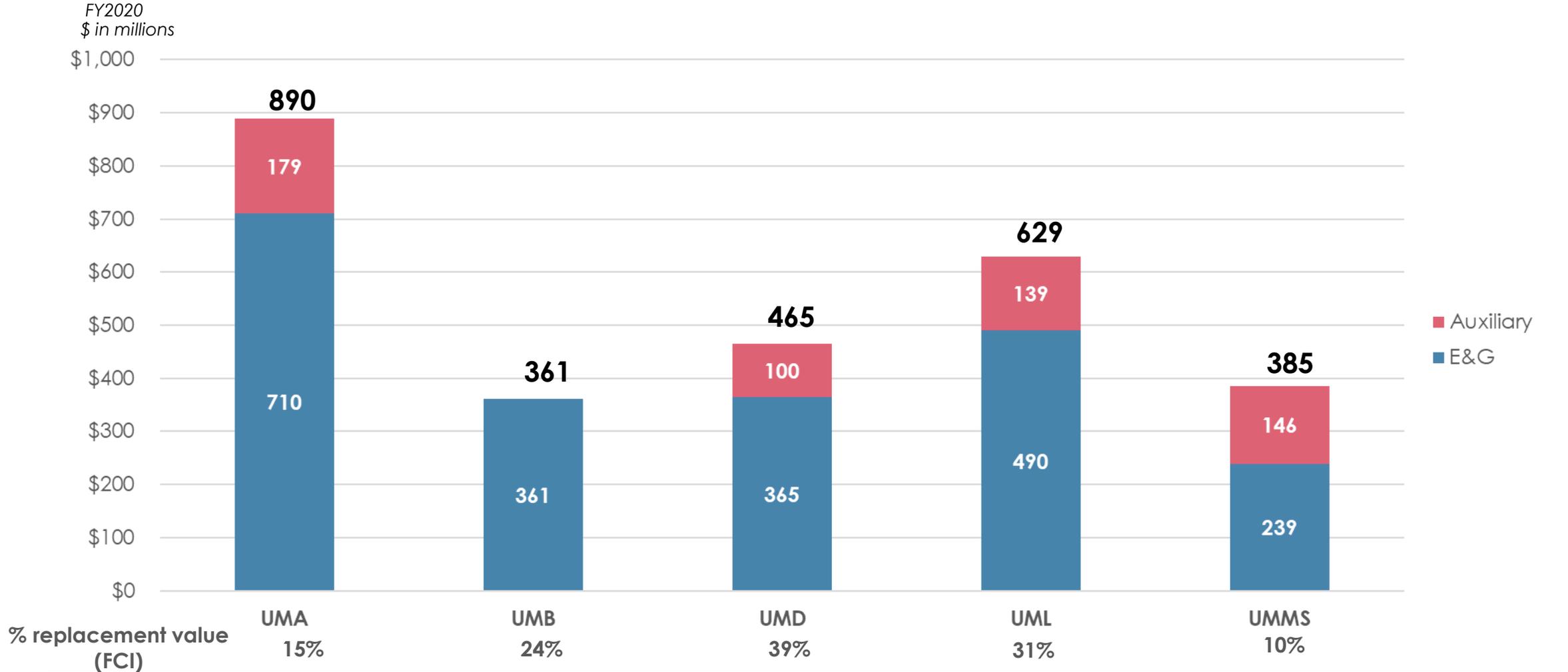
Deferred Maintenance Backlog

Total deferred maintenance is approximately \$4.0 billion, down from \$4.4 billion a year prior. Addressing the backlog over a 10 year period would require a \$400 million investment annually.



Deferred Maintenance Backlog: 1-3 Years

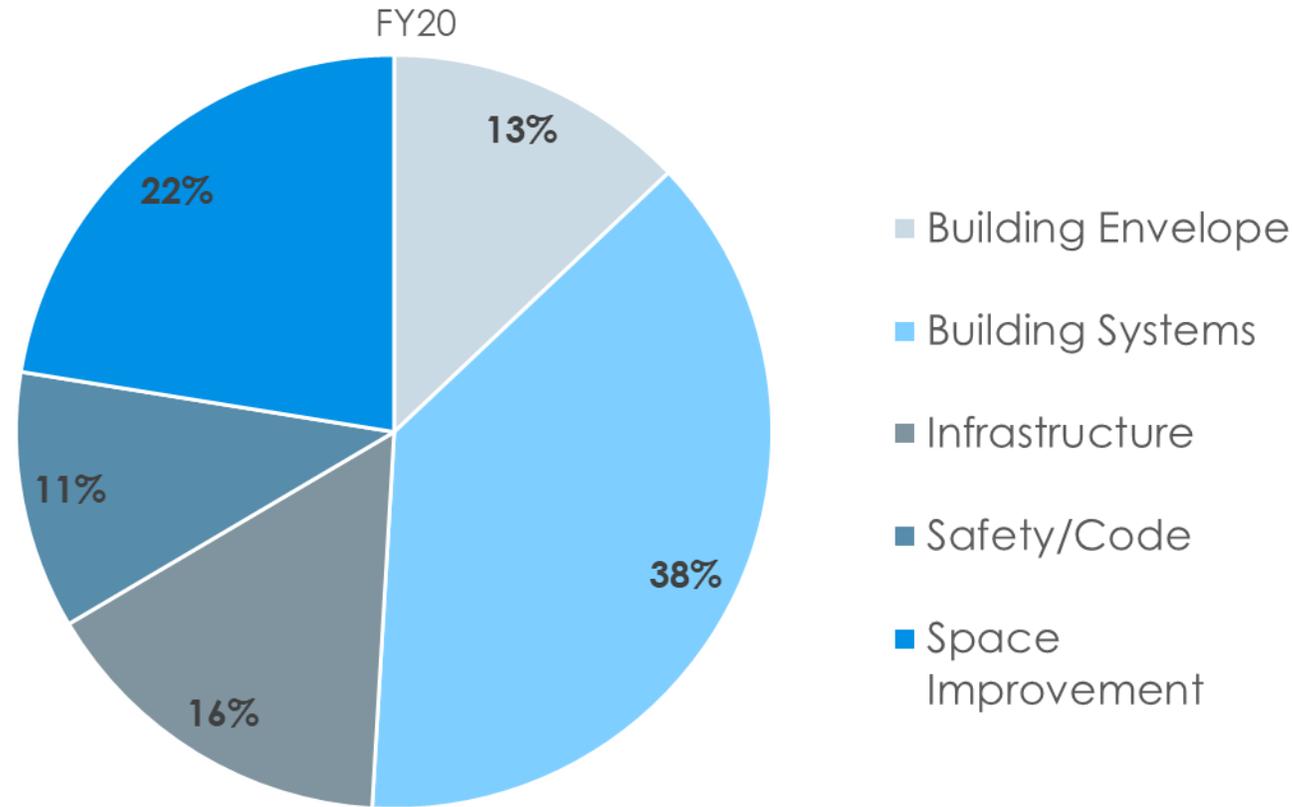
The deferred maintenance needs coming due in 1-3 years total approximately \$2.7 billion



Deferred Maintenance Backlog: by Type

The 1-3 years deferred maintenance needs at UMass total approximately \$2.7 billion

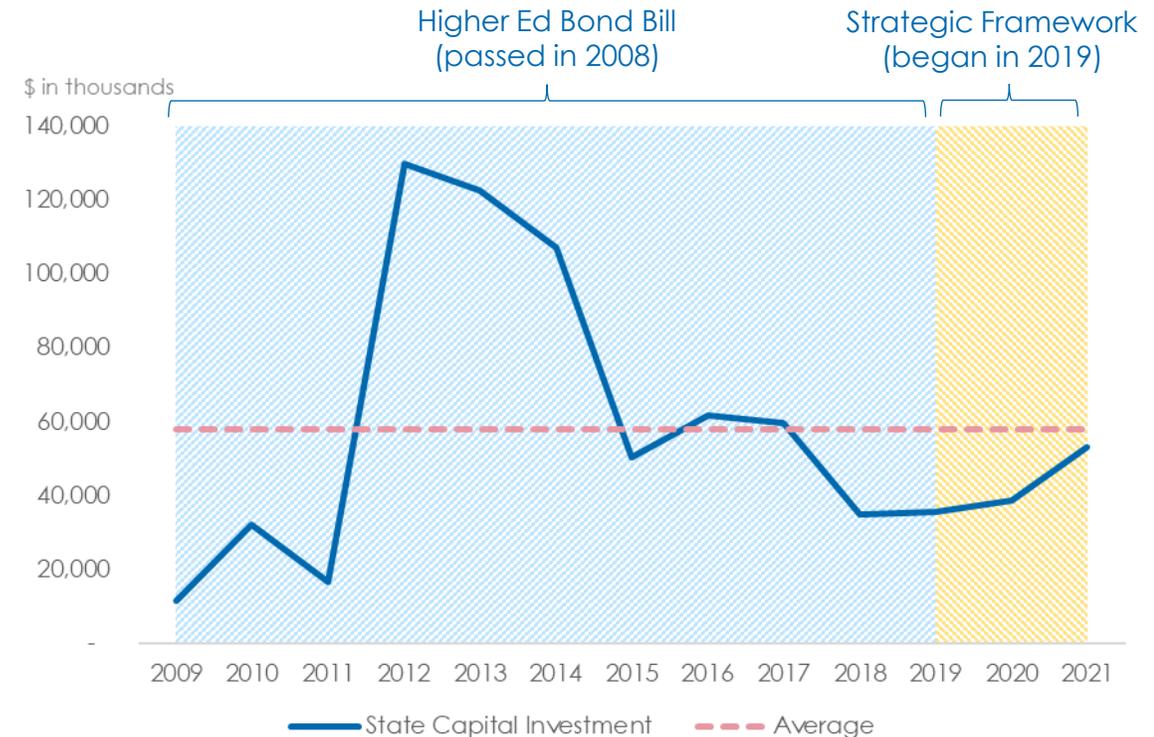
- Consistent with Gordian higher education clients



State: Strategic Framework for Higher Ed Capital Investment

- Executive Office for Administration & Finance develops an annual statewide capital plan, approves projects funded by University debt and, through the Division of Capital Asset Management & Maintenance, manages state funded projects.

Programs		State Funding
Major Projects	Major renovation, demolition, or replacement of existing facilities	\$78M Substructure at Boston; \$25M SENG Renovation at Dartmouth
Critical Repairs	Renewal, repair and replacement of equipment, systems and infrastructure (aka deferred maintenance)	\$76M commitment FY19 – FY23 (~\$15M annually)
Small Projects	small repair/replacement projects that can be completed quickly	\$6.7M allocated in FY21



Capital Project Approvals

Approving Authority

Board of Trustees

- \$10M+ total project cost, or
- \$2M+ total project cost and requires debt

President

- \$2M-\$10M total project cost
- Does not include debt

Campus

- <\$2M total project cost

Project Status

Authorized

- Initial authorization from Board or President (Vote 1)

Approved

- Final approval from Board or President (Vote 2 & Vote 3)

Conceptual (not yet authorized)

- Priority projects planned but not yet authorized (Campus strategic, master and energy plans)

Funding Sources Defined

University Sources

Debt

Borrowed through UMBA, MHEFA or WCCC; borrowing campuses are responsible for annual debt service payments

Local

Reserves or funds programmed within a campus's operating budget

External

Fundraising or grants from federal, local or private sources

Non-University Sources

State

Borrowed and appropriated by the State through the strategic framework for higher education capital investment

Alternative

Contractual agreements between the University and a private entity to facilitate the construction, operation, and/or financing of a capital project

Capital Plan Summary

Additions to FY22 – FY26 Capital Plan

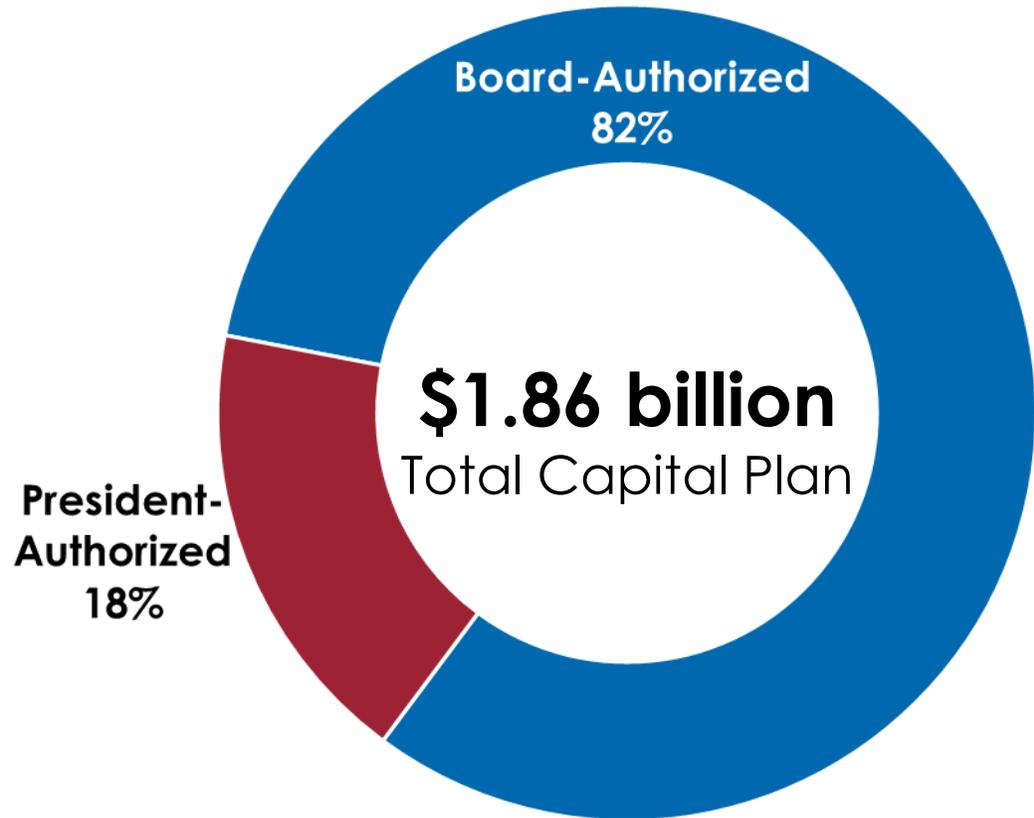


30 new projects

4 projects for Board authorization
26 projects for President authorization



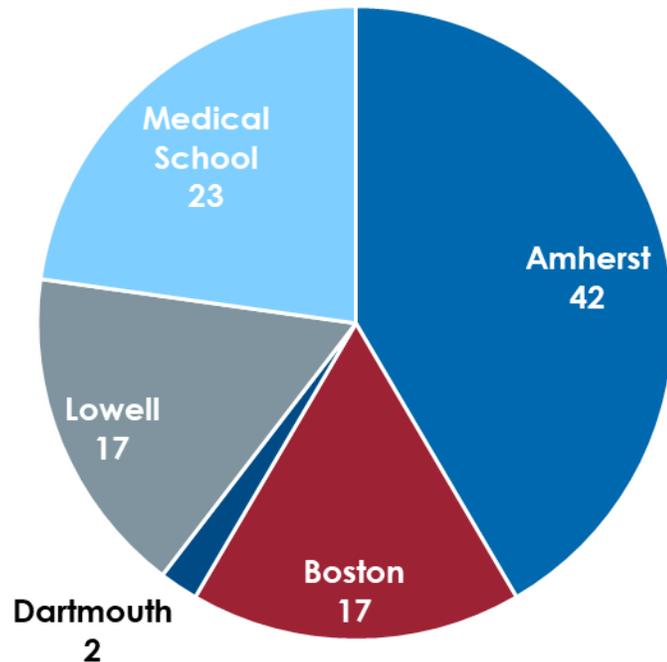
\$303 million
increase in projects



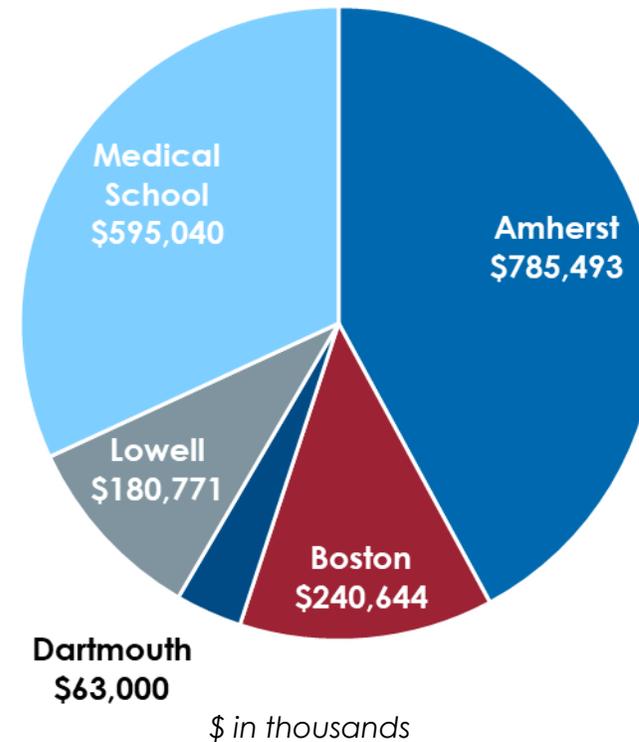
Capital Plan

FY22-FY26 capital plan includes 101 projects totaling \$1.86 billion.

Number of Projects
101

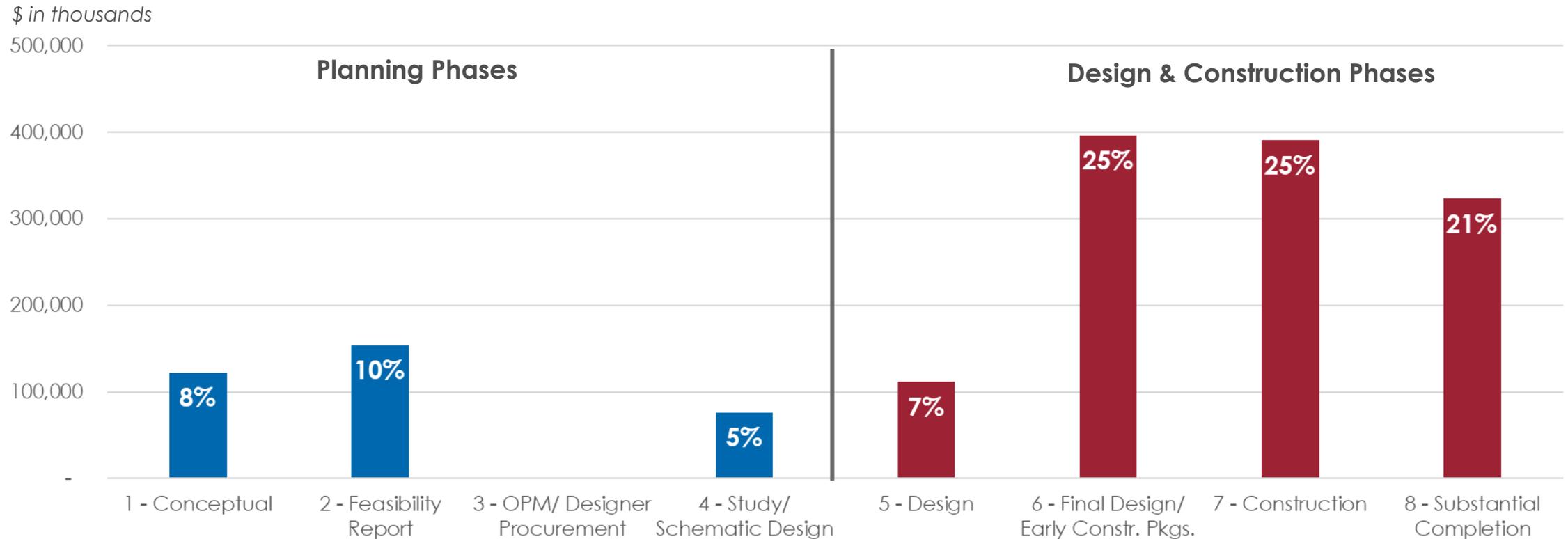


Estimated Cost of Projects
\$1.86B



Project Phases Dashboard

46% of projects are in construction or substantially complete (phases 7 & 8).



Note: Phases 1-4 are authorized with Vote 1. Phases 5-9 are approved with Vote 2. Phase 9 is not shown, as it indicates completion. Data as of 9/2021. Percentages based on project cost. Alternative financing & delivery projects excluded.

Alternative Finance & Delivery

University continues to pursue public-private partnerships as innovative means of capital delivery.

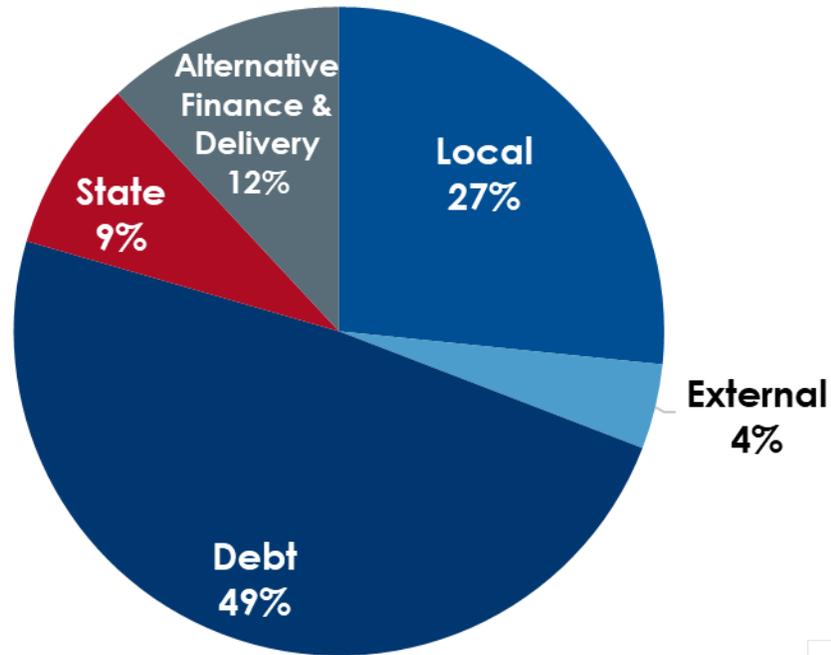
\$ in thousands

Campus	Project	Cost (\$)	Vote Status
Amherst	North Village Apartments	67,500	Vote 2 (9/4/19)
Amherst	Housing Expansion	210,000	Vote 2 (9/4/19)
Boston	Calf Pasture Pump House	TBD	Vote 1 (9/4/19)
Lowell	Tsongas Center Annex	12,000	Vote 2 (12/5/19)
Total:		\$289,500	

Note: the project costs for the Amherst projects above have been updated since receiving the vote 2 based on the latest information from the developer.

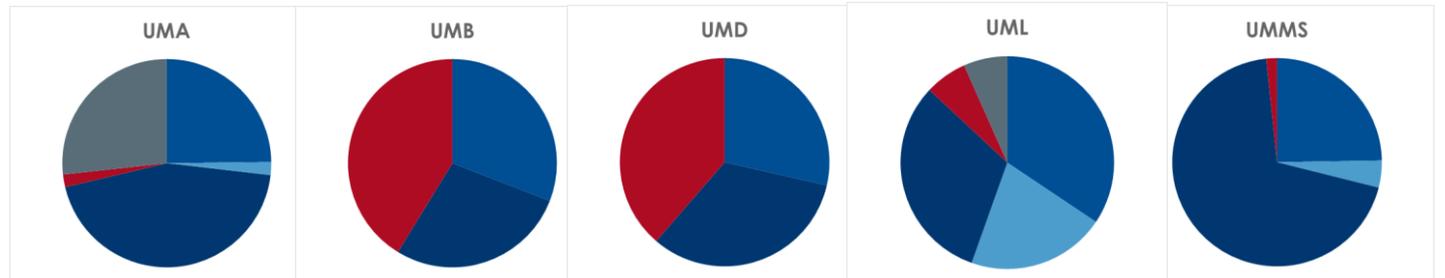
Funding Sources Dashboard

79% of Capital Plan funded by University resources.



\$ in thousands

Funding Source	Total Capital Plan	% Total
Debt	906,774	49%
Local	496,612	27%
External	78,939	4%
Subtotal University	1,482,325	79%
Alternative Finance & Delivery	222,000	12%
State	160,624	9%
TOTAL	1,864,948	



Project Spending Dashboard

26% of Capital Plan spending has occurred; spending to date varies by source.

Capital Plan = \$1.86 billion



Debt = \$907 million



Local/External = \$576 million



State = \$161 million



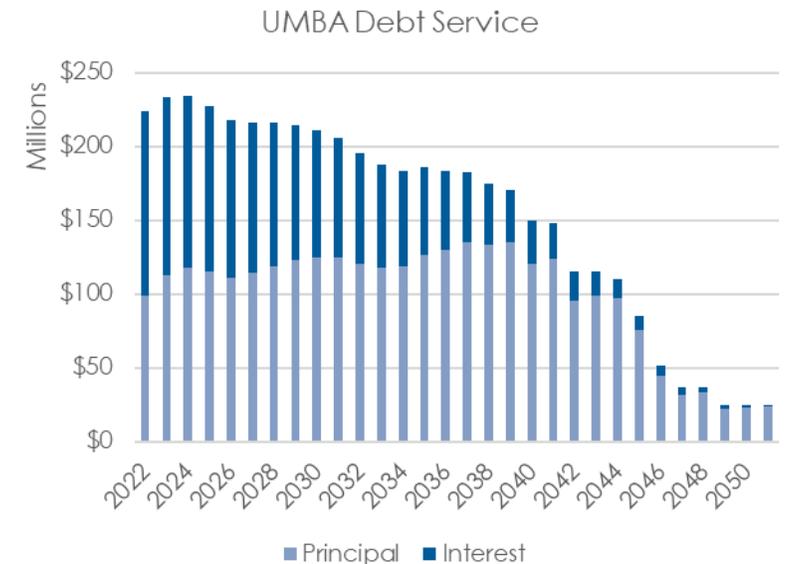
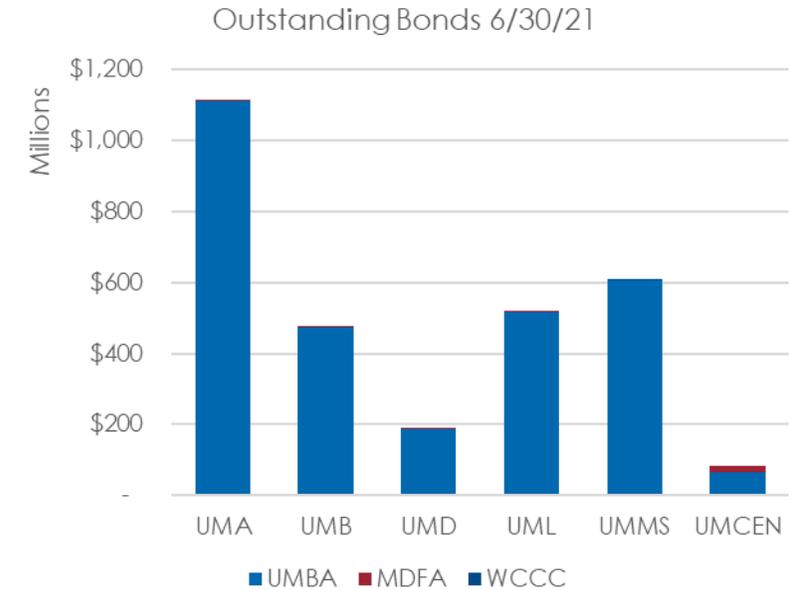
Note: Spending through 6/30/21. Projects in phases 9A and 9B have been archived due to completion.

University Outstanding Debt

- The University had \$3.0 billion in outstanding bonds as of 6/30/21

- University debt consists of UMBA, MDFA, & WCCC bonds:
 - UMBA debt = \$3.0 billion
 - MDFA debt = \$20.6 million
 - WCCC debt = \$425 thousand

- 59.8% of outstanding UMBA bonds are payable within 15 years



Financing Plan for the FY22-FY26 Capital Plan

- University typically issues debt every 2 years; timing & structuring developed by UMBA in consultation with the President's Office and the campuses.
- Capital plan requires \$907 million in debt; \$350 million issued to date; \$557 million remaining.
- UMBA uses Commercial Paper (CP) to support project spending in advance of debt issuance:
 - Current CP program totals \$200 million
 - New Education & Research Building at Medical School requires \$325 million, exceeding available CP

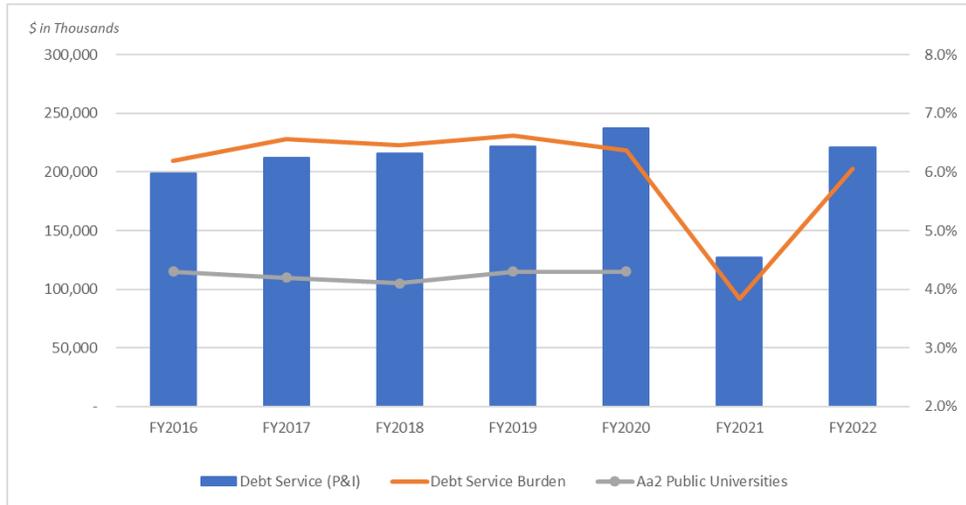
\$ in thousands

Campus	Total Debt in Capital Plan	Debt Issued as of January 2020	Additional Debt Required	CP Drawn as of July 2021	Preliminary Estimates		
					FY22 Bond Issuance	FY24 Bond Issuance	FY26 Bond Issuance
UMA	349,178	234,787	114,392	-	46,892	33,750	33,750
UMB	66,966	27,385	39,581	-	39,581	-	-
UMD	20,629	-	20,629	3,200	20,629	-	-
UML	57,000	-	57,000	-	-	24,500	32,500
UMMS	413,000	88,000	325,000	47,000	-	325,000	-
Total	\$906,774	\$350,172	\$556,602	\$50,200	\$107,102	\$383,250	\$66,250

Summary of Key Financial Ratios

- Debt Service Burden: 6.4% for FY20
 - Better than the University policy ceiling of 8%
 - Greater than Moody's Aa2 median of 4.2%
 - *Simple* pro forma analysis assuming full debt to fund Capital Plan creates stress
- Debt Service Coverage: 2.0 times coverage for FY20
 - Less than Moody's Aa2 median of 3.0 times coverage
 - *Simple* pro forma analysis layering in the Capital Plan pushes coverage below desired benchmark
 - Rating Agency exposure if below 2.0 times coverage
- Financial Leverage: 0.53x for FY20
 - Less than Moody's Aa2 median of 1.35x.
 - *Simple* pro forma analysis reveals financial leverage ratio stressed further

Debt Service Burden (on watch)

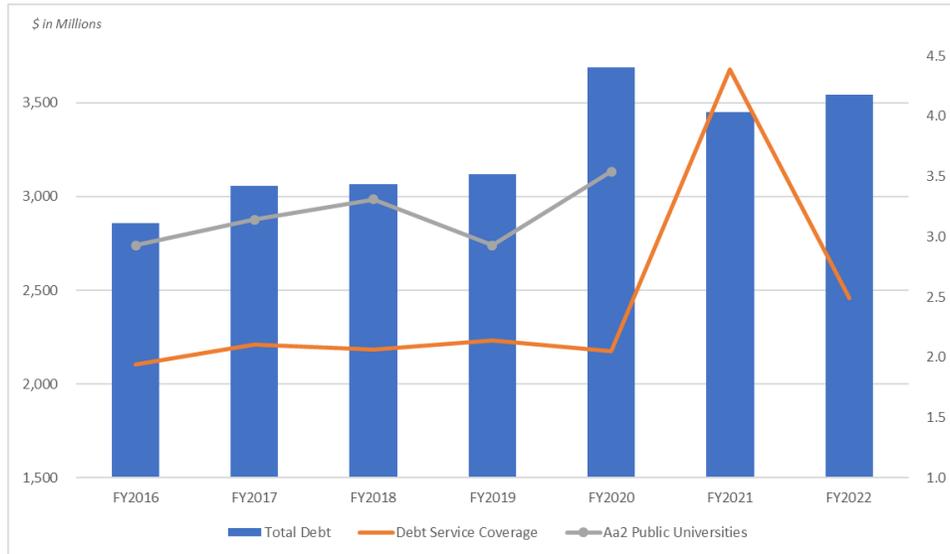


- Over the last 5-years, trend shows increased debt service burden toward the Board policy 8% cap.
- FY21 projection reflects the one-time impact of restructured principal to support cash flow analysis.
- University exceeds peers driven by fewer outside resources, such as state funding, to support critical capital needs.

	Actual					Q3 Projection	Budget
	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Amherst	6.4%	6.6%	6.8%	6.5%	6.4%	4.0%	5.9%
Boston	4.9%	5.9%	6.3%	6.9%	7.5%	4.4%	6.7%
Dartmouth	8.4%	7.8%	7.6%	7.8%	7.7%	4.1%	6.5%
Lowell	7.5%	7.3%	7.4%	7.3%	6.8%	5.1%	6.5%
Medical	5.2%	6.0%	5.1%	5.5%	4.9%	2.3%	5.2%
Central	3.7%	3.4%	2.8%	4.5%	4.4%	5.1%	5.0%
University	6.2%	6.6%	6.5%	6.6%	6.4%	3.8%	6.1%

Excludes impact of GASB 68 & 75

Debt Service Coverage (on watch)



- Over the last 5-years, trend shows level debt service coverage.
- University coverage is below peers driven by increased debt; as operating margin grows so does debt coverage.

	Actual					Q3 Projection	Budget
	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Amherst	2.5	2.3	2.2	2.3	2.0	3.6	2.3
Boston	1.0	1.1	1.4	1.6	1.7	4.5	3.0
Dartmouth	1.4	1.8	1.3	1.6	1.5	3.0	1.7
Lowell	1.7	2.0	1.9	2.0	1.9	3.0	1.1
Medical	1.7	2.2	2.3	2.6	2.7	5.1	2.1
Central	4.6	5.6	7.0	2.8	3.0	2.6	1.5
University	1.9	2.1	2.1	2.1	2.0	4.4	2.5

- FY21 projection reflects the one-time impact of restructured principal to support cash flow analysis.

Illustrative Impact on Debt Service Ratios

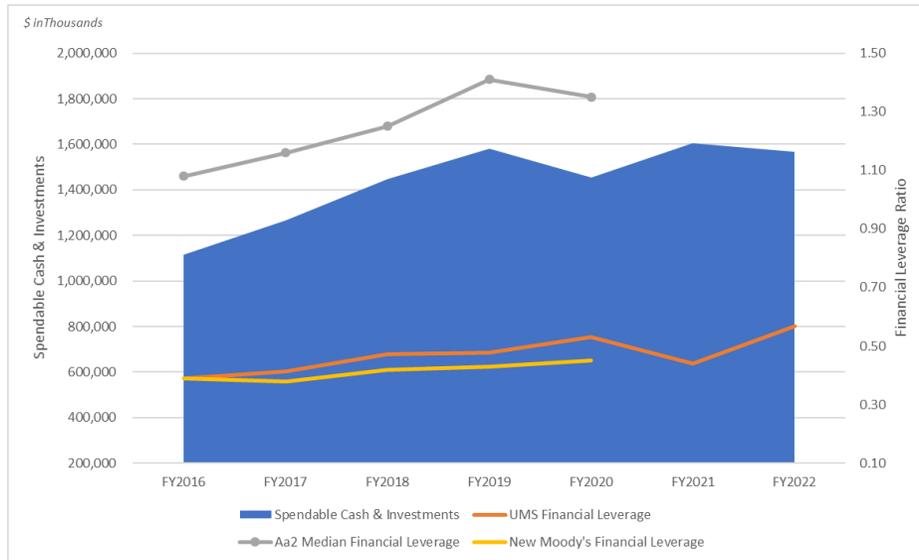
Borrowing to complete the plan will increase debt burden and decrease debt coverage.

Debt Burden	FY20	Pro-forma Ratio
UMA	6.4%	7.0%
UMB	7.5%	8.0%
UMD	7.7%	8.2%
UML	6.8%	7.5%
UMMS	4.9%	7.1%
Total	6.4%	7.4%

Debt Coverage	FY20	Pro-forma Ratio
UMA	2.0	1.8
UMB	1.7	1.6
UMD	1.5	1.4
UML	1.9	1.7
UMMS	2.7	1.8
Total	2.0	1.8

- The FY22-FY26 capital plan identifies \$557 million of additional borrowing needs.
- Simple pro-forma analysis shows a concerning debt burden trend with some campuses exceeding the 8% debt burden cap.
- Pro-forma analysis also shows each campus falling below 2.0x debt service coverage.
 - Potential rating agency exposure if <2.0x.
 - Even \$100M in additional debt, holding all else constant, pushes coverage below 2.0x.

Financial Leverage (on watch)



- Over the last 5-years, trend shows level financial leverage.
- University financial leverage is below peers driven by increased debt.
- Moody's has altered its formula taking account for "total" cash & investments and "total" adjusted debt (which includes pension burden)

	Actual					Q3 Projection	Budget
	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Amherst	0.48	0.48	0.49	0.54	0.49	0.48	0.48
Boston	0.15	0.12	0.12	0.16	0.19	0.19	0.19
Dartmouth	0.20	0.21	0.28	0.19	0.20	0.20	0.20
Lowell	0.27	0.25	0.24	0.24	0.26	0.27	0.26
Medical	0.34	0.42	0.64	0.72	0.64	0.71	0.65
Central	1.95	2.35	2.46	2.72	2.64	2.64	2.64
University	0.39	0.41	0.47	0.48	0.53	0.47	0.46
New Moody's Financial Leverage	0.39	0.38	0.42	0.43	0.45		

Illustrative Impact on Financial Leverage Ratio

Borrowing to complete the plan will erode University's Financial Leverage Ratio.

Financial Leverage*	FY20	Pro-forma Ratio
UMA	0.49	0.45
UMB	0.24	0.18
UMD	0.33	0.19
UML	0.26	0.23
UMMS	0.64	0.43
Total	0.53	0.44

*Moody's has updated it's calculation of this metric to include system-level pension liability

- The FY22-FY26 capital plan identifies \$557 million of additional borrowing needs.
- Simple pro-forma analysis adding this amount of debt to FY20 would result in erosion of the financial leverage ratio *on a pro forma basis*.
 - Rating Agency exposure if <0.40x.
 - Holding all else equal to FY20, this ratio would decrease and move closer to the 0.40x with the additional debt.



Next Steps

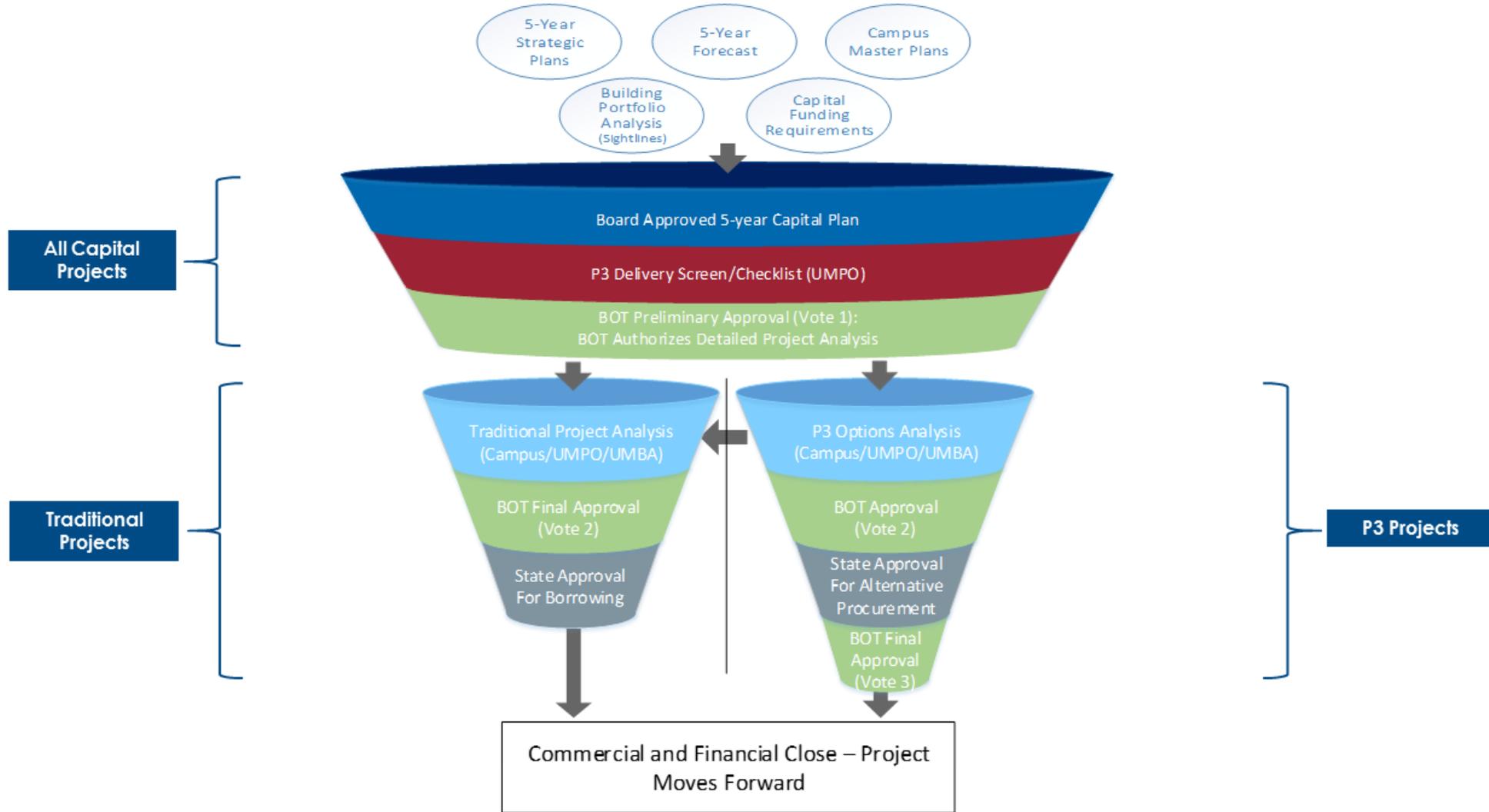
- Recommend approval of the capital plan and project changes:
 - Vote 1: 4 projects (1 Amherst, 3 Lowell) totaling \$125 million
 - Cost Change: 1 project (Lowell) increase by \$4.2 million to \$22.7 million
- Capital planning policy and monitoring include sufficient safeguards to ensure financial sustainability
- Work underway on 5-year financial forecast and key ratios will be updated
 - Coordination between UMBA, the President's Office and Campuses required to properly reflect borrowing needs, timing and structure into financial forecast
- Developing dashboard using source system data to track keep up spending and assessing impact on deferred maintenance backlog
- Continued advocacy for State and Federal resources to support capital plan and deferred maintenance needs

Appendices

- Capital Policy Overview
- Dashboard Data
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Capital Policy Overview

Capital Approval Process



Definition of Phases

1. Conceptual – Initial project identification that there is a need by Campus, possibly from Master Plan.
 2. Feasibility Report – Developed by the Campus to identify and establish initial project scope, justification, preliminary program, size, location, deferred maintenance, enabling projects, schedule and project budget. Funding sources identified.
 3. Owner's Project Manager / Designer Procurement – Owner's Project Manager (OPM) and Designer selection and award.
 4. Study / Schematic Design – Project Study; Program development/verification; Schematic Design. Final scope determined with estimated construction cost (ECC), total project cost (TPC) and schedule defined.
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5. Design – Project design continues through Design Development and Construction Document phase.
 6. Final Design / Early Construction Packages – Completion of design, bid phase, construction mobilization, early construction packages commence, establish Guaranteed Maximum Price (GMP).
 7. Construction – Project is under construction.
 8. Substantial Completion – Final 1% of construction, punch list, final commissioning, certificate of occupancy, closeout, final report.
 9. A. Construction Complete – Construction on the project is complete however bills continue to be paid on the project so reporting in the database continues.
 9. B. Financially Complete – All construction and bills associated with the project are complete and the project can be archived in the database.

Key Financial Ratios Defined

Debt burden – Compares the relative cost of borrowing to overall expenditures

$$\frac{\text{Debt service (P\&I)}}{\text{Total expenses}}$$

Debt service coverage – Measures the ability to make debt service payments from annual operations

$$\frac{(\text{Total revenues} - \text{total expenses}) + \text{depreciation} + \text{interest}}{\text{Debt service (P\&I)}}$$

Financial Leverage Ratio – Measures the ability to repay bondholders from wealth that can be accessed over time or for a specific purpose

$$\frac{\text{Spendable Cash \& Investments}}{\text{Total Debt}}$$

Dashboard Data

FY22-FY26 Capital Plan Summary: Approved/Authorized Projects

\$ in thousands

Campus	BOT Authorized		President Authorized		Total Authorized	
	Projects	Project Cost	Projects	Project Cost	Projects	Project Cost
UMA	15	637,443	27	148,050	42	785,493
UMB	3	181,740	14	58,904	17	240,644
UMD	2	63,000	0	-	2	63,000
UML	5	129,746	12	51,025	17	180,771
UMMS	9	519,340	14	75,700	23	595,040
University	34	\$1,531,269	67	\$333,679	101	\$1,864,948

As of 9/2021

Project Phases Dashboard: Traditional Projects

- There are 9 pre-defined project phases. Each project has been categorized in a phase ranging from conceptual to substantial completion and eventually completed.

Traditional Projects: Project Phase	UMA		UMB		UMD		UML		UMMS		Total	
	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$
1 - Conceptual	0	-	5	28,342,750	0	-	6	51,700,000	7	42,340,000	18	122,382,750
2 - Feasibility Report	10	82,250,000	0	-	0	-	3	69,000,000	1	3,000,000	14	154,250,000
3 - OPM/Designer Procurement	0	-	0	-	0	-	0	-	0	-	0	-
4 - Study/Schematic Design	4	51,000,000	6	16,746,619	0	-	0	-	2	8,800,000	12	76,546,619
Authorized Subtotal	14	\$133,250,000	11	\$45,089,369	0	\$0	9	\$120,700,000	10	\$54,140,000	44	\$353,179,369
5 - Design	1	15,000,000	0	-	1	18,000,000	3	16,125,000	3	62,300,000	8	111,425,000
6 - Final Design/Early Constr. Pkgs.	3	63,300,000	0	-	0	-	0	-	2	333,300,000	5	396,600,000
7 - Construction	7	51,123,376	3	146,804,972	1	45,000,000	2	25,045,756	6	122,800,000	19	390,774,104
8 - Substantial Completion	15	245,320,000	2	48,750,000	0	-	2	6,900,000	2	22,500,000	21	323,470,000
Approved Subtotal	26	\$374,743,376	5	\$195,554,972	2	\$63,000,000	7	\$48,070,756	13	\$540,900,000	53	\$1,222,269,104
Total Traditional Projects	40	\$507,993,376	16	\$240,644,341	2	\$63,000,000	16	\$168,770,756	23	\$595,040,000	97	\$1,575,448,473

Alternative Finance & Delivery: Public-Private Partnerships

P3 Projects	UMA		UMB		UMD		UML		UMMS		Total	
	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$
Vote 1	0	-	1	-	0	-	0	-	0	-	1	-
Vote 2	2	277,500,000	0	-	0	-	1	12,000,000	0	-	3	289,500,000
Vote 3	0	-	0	-	0	-	0	-	0	-	0	-
Total P3 Projects	2	\$277,500,000	1	\$0	0	\$0	1	\$12,000,000	0	\$0	4	\$289,500,000

Total Authorized Projects	UMA		UMB		UMD		UML		UMMS		Total	
	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$
Vote 1	14	\$133,250,000	12	\$45,089,369	0	\$0	9	\$120,700,000	10	\$54,140,000	45	\$353,179,369
Vote 2	28	\$652,243,376	5	\$195,554,972	2	\$63,000,000	8	\$60,070,756	13	\$540,900,000	56	\$1,511,769,104
Vote 3	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Total Authorized Projects	42	\$785,493,376	17	\$240,644,341	2	\$63,000,000	17	\$180,770,756	23	\$595,040,000	101	\$1,864,948,473

Addressing Deferred Maintenance: Keep Up Tracking

Keep Up

A dashboard for regular reporting of Keep Up & Catch Up spending is being developed

- Using source systems data to identify keep up spending will allow for reliable, consistent reporting to inform decision making
- UMPO will facilitate a central reporting mechanism with the campuses to allow for improved reporting, consistency, and the ability to track spending in real time

	Definition	Proposed Methodology for Reporting	Best Practice Target
Keep Up	<ul style="list-style-type: none"> • Operating budget or capitalized expenses from recurring funding source • The annual investment needed to ensure buildings will properly perform and reach their useful life • Keeps backlog from growing 	<p><u>Reporting past spending:</u></p> <ul style="list-style-type: none"> • Certain plant funds & project IDs • Assigned Keep Up or Catch Up based on campus indication <p><u>Future Reporting:</u></p> <ul style="list-style-type: none"> • All plant funds or Project IDs will require a Keep Up, Catch Up, or Exclude designation in Peoplesoft 	<p>FY20: \$205.8 million (vs \$67.5 million)</p>

Annual Spending Targets to Address Keep Up

Keep Up Best Practice:

- Defined by Gordian; industry best practice; uses each building component lifecycle
- Life Cycle Need: individual building components all have an expected longevity after which they will need to be replaced
- Investment Target Best Practice: Gordian models the investment amount to keep up with facilities' needs on an annual basis to manage growth in the backlog. The Annual Investment target is discounted from the Life Cycle Need to account for various factors including good maintenance.

\$ in thousands

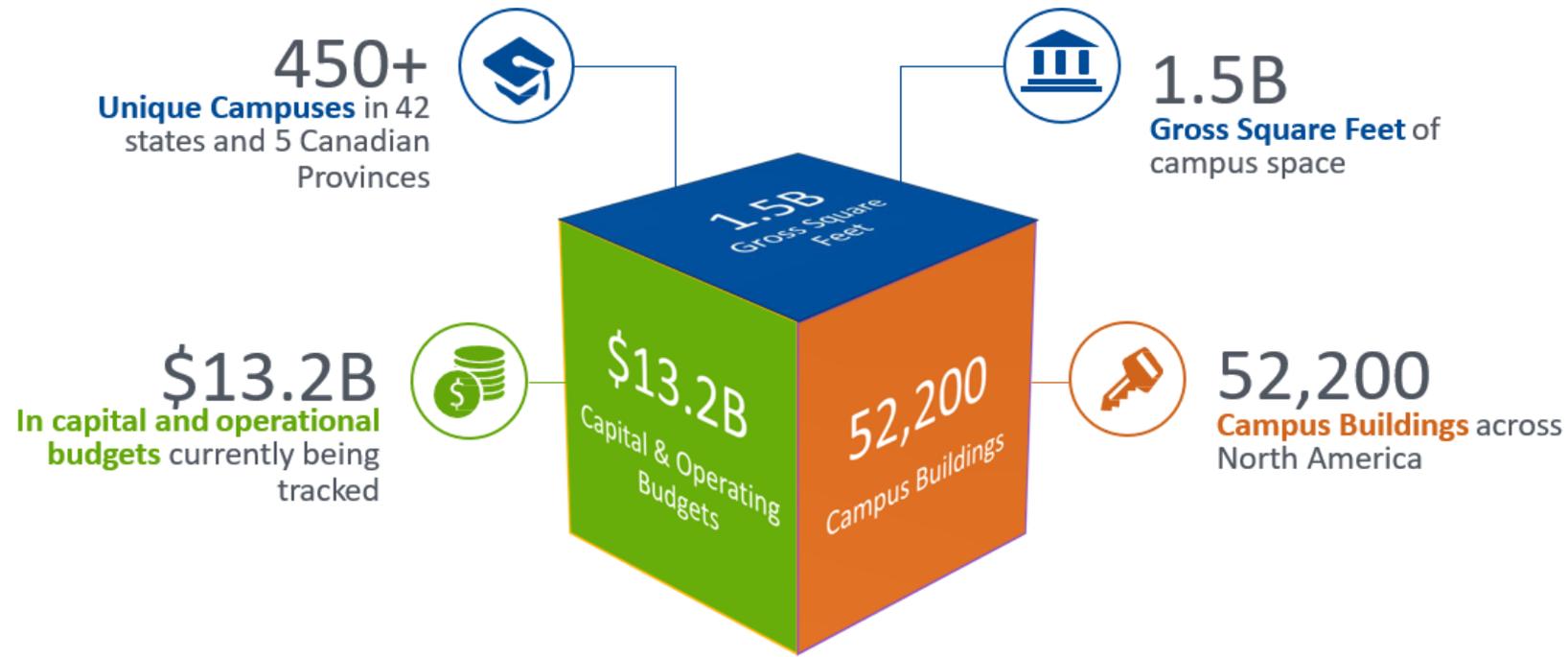
Campus	FY2020 Best Practice	FY2020 Keep Up Spending
UMA	84,446	38,696
UMB	21,293	-
UMD	15,255	1,023
UML	26,588	2,371
UMMS	58,216	25,410*
Total	\$205,798	67,500

*Includes planned maintenance spending

Gordian (formerly Sightlines)

Uses data to help colleges and universities develop the most effective strategies and plans for facilities stewardship

- UMass contracts with Gordian to obtain the data, contextual understanding, and strategic recommendations in order to steward facilities most effectively



Regular Reporting of Keep Up

- The President's Office is working with the campuses to utilize PeopleSoft data to consistently track keep up spending.
- Beginning with FY21 data, comparisons will be made to campus reported data to identify differences and determine PeopleSoft requirements for consistent, accurate reporting.
- Once the spending dashboard is completed, targets will be established by working with the campuses, utilizing Gordian data and benchmarking to peers.
- Additionally, looking at the \$4.0 billion backlog and determining a reasonable, achievable target will be established.

Conceptual (Not Yet Authorized) Projects

Campus Master Planning

- Master plans provide a framework for campus development & capital improvements
- Master planning engages key stakeholders including students, staff, faculty and external partners in how to best meet campus needs into the future
- The most recent master plans for each campus were published / updated:

Campus	Master Plan	Energy	Carbon/Climate
Amherst	2012	2015	2020
Boston	2009 (planning underway for update in 2022)	2021	2014 (climate resiliency plan)
Dartmouth	2017	2021	2010
Lowell	2016* (update in progress)	2021 (Alternative energy plan in progress)	2015
Medical School	2019	2019	2021

FY22-FY26 Capital Plan Summary: Conceptual (Not Yet Authorized) Projects

\$ in thousands **Conceptual (Not Yet Authorized)**

Campus	Projects	Project Cost
UMA	15	\$1,222,650
UMB*	0	\$0
UMD	11	\$196,194
UML	16	\$500,750
UMMS	7	\$64,258
University	49	\$1,983,852

*Currently updating campus master plan

Conceptual (Not Yet Authorized) Project List:

- Capital projects for future consideration that are consistent with campus master and strategic plans.
- Before proceeding, Projects will require authorization by the Board or President, identification of a funding source, and inclusion in the financial forecast.

Sustainability

University & State are Aligned on Energy Efficiency Goals

Significant investment required to meet these goals.

University Priorities:

- Board adopted Sustainability policy in 2016 with strategies around reducing carbon emissions and energy use; increasing use of renewable energy
- University leads in new construction and renovations with 31 buildings LEED certified; 33% of statewide LEED certifications
- Partnership with DOER in emissions reduction efforts

State Priorities:

- Executive Order 594 signed in April; directing state agencies to steps to reduce greenhouse gas emissions and improve energy efficiency toward net zero goal by 2050
- Focus on existing buildings, reducing onsite fossil fuel consumption and optimizing building performance
- Requires new construction be LEED Silver or higher and perform 20% better than existing energy code requirements

State Investment Required to Meet Goals

Campuses engaged in energy & sustainability master planning efforts and coordinating with State.

- **Funding**: will require state investment to decarbonize campus energy infrastructure
 - For example, electrifying campus heating and cooling systems to meet emission goals requires investments in new utility infrastructure on all 5 campuses – estimated cost \$1 billion+
- **Infrastructure**: concerns on the ability of the ISO New England Grid to keep pace with demand while ensuring the reliability and resiliency for business continuity
- **Deferred Maintenance Needs**: significant backlog impacts energy efficiency; requires a partnership for funding to address projects that reduce energy demand and address long-standing capital needs

Real Estate & Asset Management

Real Estate & Asset Management

With 375 buildings and 28.3 million gross square feet of space, UMass has a complex and extensive real estate portfolio that needs to be actively managed.

- University mission built on research and education; mission cannot be reached without state of the art facilities.
- Regularly evaluating real estate assets; with the advice of industry experts, assesses opportunities to acquire real estate, change the use of existing real estate and dispose and monetize property, when in the best long term interest of the University.
- Campuses have acquired buildings and land in different ways such as donations, State resources, and University resources including debt.

Acquisitions & Dispositions

UMass actively manages its real estate which sometimes requires the acquisition and disposition of property when it is in the long-term interest of the University to do so.

Campus	Transactions	Amount (\$)	Status
Amherst	472 North Pleasant Street	12,500,000	Complete - 2020
Amherst	Mount Ida	75,000,000	Complete - 2018
Amherst	400 Venture Way, Hadley	4,650,000	Complete - 2018
Lowell	225 Aiken Street	5,800,000	Complete - 2015
Lowell	193-195 & 199-201 Pawtucket Street	2,000,000	Complete - 2015
Lowell	Perkins Lofts	61,500,000	Complete - 2016
Lowell	West Campus (disposition)	4,051,770	Complete - 2019

Boston Bayside Property Update: On February 14, 2019, UMass designated Accordia Partners to build a mixed-use urban innovation campus on the 19.94-acre Bayside property, bought by UMass for \$18.7 million in 2010. Accordia offered a minimum of \$192.5 million and a maximum of \$235 million (depending on the square footage approved) for the 99-year-lease which is scheduled to be finalized on or before June 2022.

Campus Data

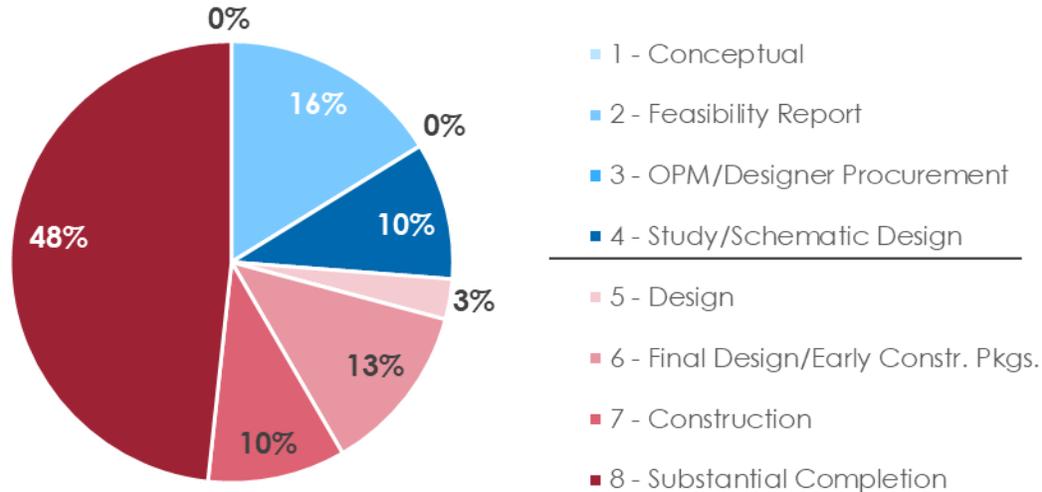
Amherst

- Relationship to Campus Strategic & Master Plans:
 - UMass Amherst relies on comprehensive academic program and space utilization studies to inform the implementation of the Master Plan and capital priorities. The capital plan provides for new and renovated facilities necessary to compete at the national level to attract and retain top faculty and students, conduct cutting edge research, and ensure academic success of a diverse student body.
- Focus on Deferred Maintenance:
 - The Capital Plan balances investments across deferred maintenance, modernization, and new construction so as to achieve the greatest possible return on investment and broadest improvement in physical capacity. The campus already reduced DM by more than \$560M since 2009 through a combination of renewal and demolition projects. The current plan continues this focus on DM and addresses priority buildings using data from Gordian and other studies.
- Commitment to Sustainability:
 - The campus established a Carbon Mitigation Taskforce and completed a comprehensive study to develop a road map towards carbon neutrality. Campus projects are guided by carbon mitigation strategies recommended in the study. The campus also leverages a strategic partnership with the regional utility provider to help incentivize energy efficiency in all projects. While our capital planning integrates sustainability into all of our decisions, achieving substantial progress towards carbon neutrality will require significant external funding.

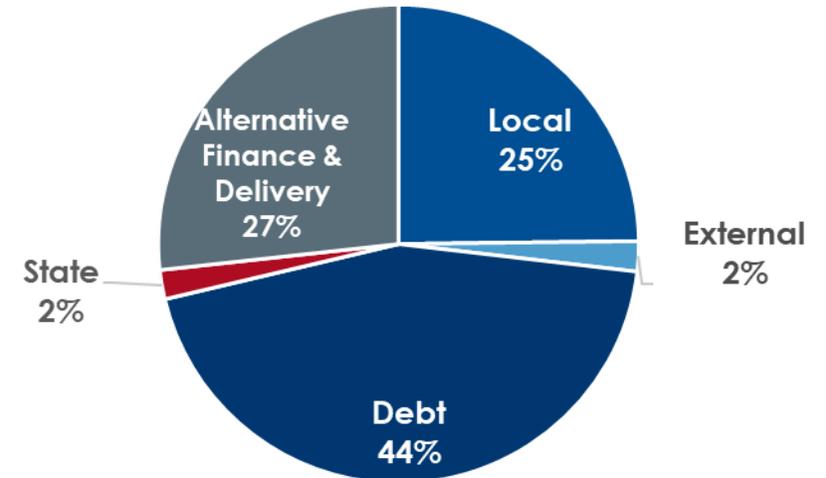
Amherst: 42 Projects; \$785M; 42% of Capital Plan

58% of Projects in Construction or Substantial Completion

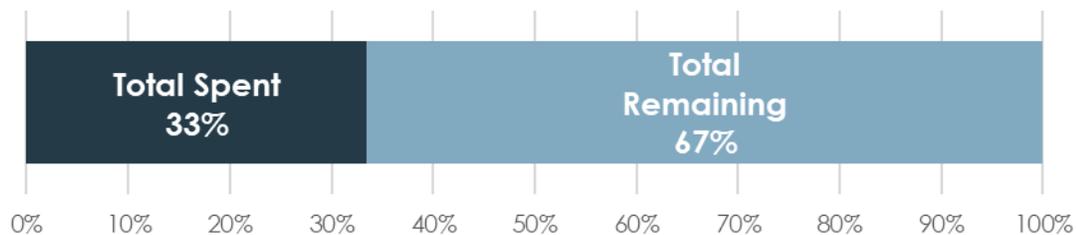
Projects by Phase



Funding Sources

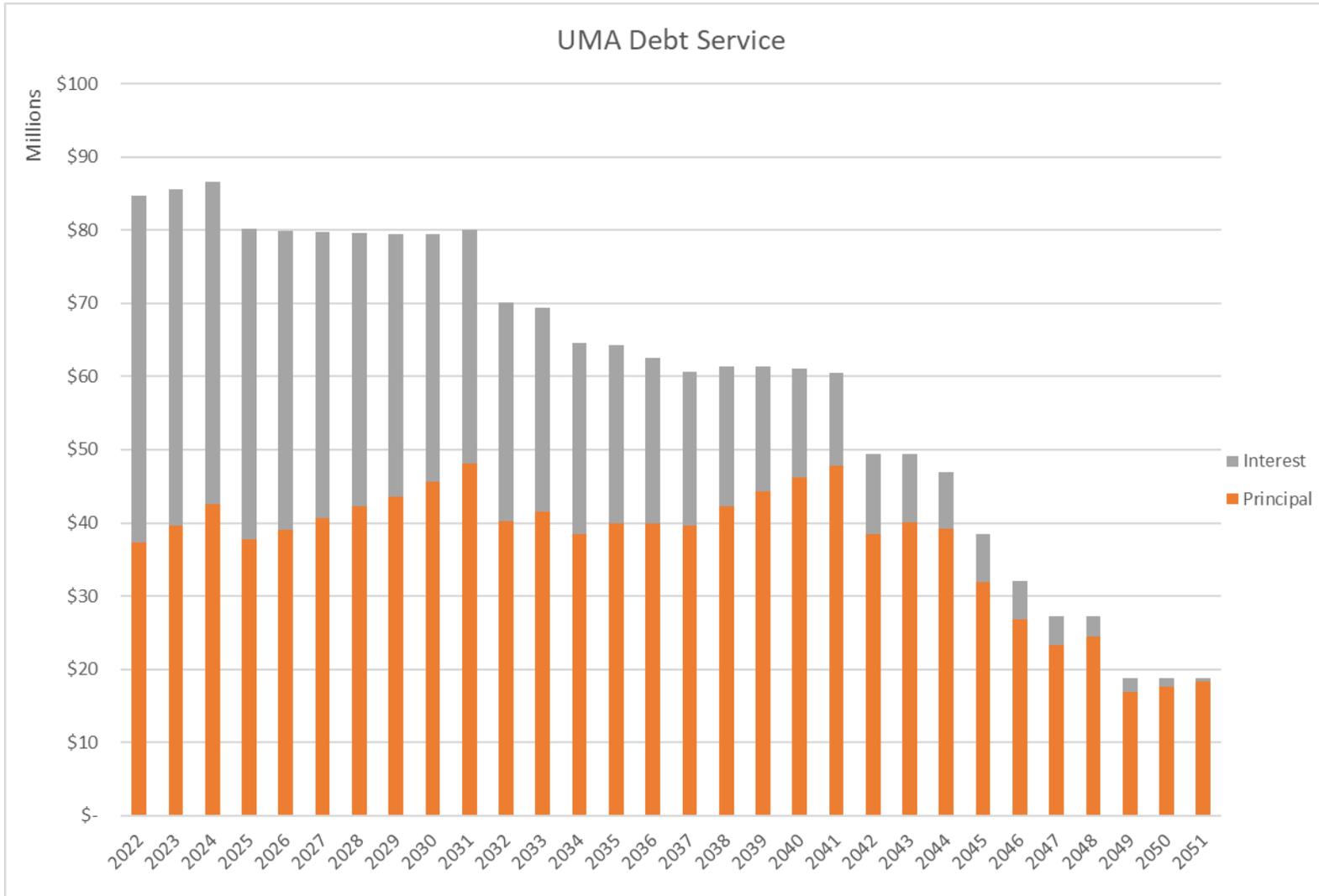


Project Spending



Key Financial Indicators	Actual					Projection	Budget	University
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY22
Debt Burden Ratio	6.4%	6.6%	6.8%	6.5%	6.4%	4.0%	5.9%	6.1%
Debt Service Coverage Ratio	2.5	2.3	2.2	2.3	2.0	3.6	2.3	2.5
Financial Leverage Ratio	0.48	0.48	0.49	0.54	0.49	0.48	0.48	0.46

*Multi-year financial forecast will be completed in December



Amherst Projects: Board

Traditional Projects			
Project	Adjusted Cost (\$)	Project Phase	Status
Thompson Deferred Maintenance	2,250,000	2 - Feasibility Report	Authorized
School of Public Health and Health Sciences Renovation	30,000,000	2 - Feasibility Report	Authorized
Goodell Renovation	35,000,000	4 - Study / Schematic Design	Authorized
Energy Improvements	15,000,000	5 - Design	Approved
Office/Lab/Academic Renovations	52,500,000	6 - Final Design / Early Construction Packages	Approved
Fine Arts Center renovations	12,600,000	7 - Construction	Approved
Goessmann, SPHHS Renovations	15,100,000	7 - Construction	Approved
Replace Oil Filled Transformers	2,000,000	7 - Construction	Approved
Worcester Dining Commons Renovation	70,300,000	8 - Substantial Completion	Approved
Campus Central Core Project	31,050,000	8 - Substantial Completion	Approved
Central Heating Plant Boiler/Co-Gen Fitout	22,600,000	8 - Substantial Completion	Approved
Student Union Building	67,200,000	8 - Substantial Completion	Approved
Whitmore Deferred Maintenance	4,370,000	8 - Substantial Completion	Approved
Total	359,970,000		

Alternative Finance & Delivery Projects	
Project	Adjusted Cost (\$)
North Village Apartments	67,500,000
Housing Expansion	210,000,000
Total	277,500,000

Amherst Projects: President

President Projects				
Project	Adjusted Cost (\$)	Project Phase	Status	
New Faculty Hire Renovations	8,000,000	2 - Feasibility Report	Authorized	
Lederle Chemistry Teaching Laboratories	9,000,000	2 - Feasibility Report	Authorized	
Washington and Kennedy Residence Halls Life Safety Upgrades	5,000,000	2 - Feasibility Report	Authorized	
Instructional Space Renovations	5,000,000	2 - Feasibility Report	Authorized	
Johnson Residence Hall DM	6,000,000	2 - Feasibility Report	Authorized	
Deferred Maintenance and Campus Infrastructure	8,000,000	2 - Feasibility Report	Authorized	
Roof Replacements	7,000,000	2 - Feasibility Report	Authorized	
Memorial Hall DM	2,000,000	2 - Feasibility Report	Authorized	
Utilities & Infrastructure	9,000,000	4 - Study / Schematic Design	Authorized	
Lederle Lab Renovation	3,000,000	4 - Study / Schematic Design	Authorized	
Brett Residence Hall DM	4,000,000	4 - Study / Schematic Design	Authorized	
Mt. Ida Office Renovation	7,000,000	6 - Final Design / Early Construction Packages	Approved	
Housing Deferred Maintenance	3,800,000	6 - Final Design / Early Construction Packages	Approved	
Sidewalks/Roads/Landscape	5,000,000	7 - Construction	Approved	
Wareham Cranberry Station	7,750,000	7 - Construction	Approved	
Lincoln Campus Center Cooling Tower	3,500,000	7 - Construction	Approved	
Johnson, Lewis, & Thatcher Deferred Maintenance	5,200,000	7 - Construction	Approved	
Artificial Turf Intramural Fields	6,500,000	8 - Substantial Completion	Approved	
Furcolo Auditorium Project	2,500,000	8 - Substantial Completion	Approved	
Hills Demolition	4,000,000	8 - Substantial Completion	Approved	
Lederle Graduate Research Center Fire Alarm	3,000,000	8 - Substantial Completion	Approved	
Morrill Science Complex, Elevator Replacement	3,800,000	8 - Substantial Completion	Approved	
Mullins Roof and Infrastructure	8,000,000	8 - Substantial Completion	Approved	
National Aeronautics, Research, Development and Training Center	5,000,000	8 - Substantial Completion	Approved	
STEM Renovations	6,500,000	8 - Substantial Completion	Approved	
Marston Repairs and Renovations	2,500,000	8 - Substantial Completion	Approved	
Information and Computer Sciences Renovations	8,000,000	8 - Substantial Completion	Approved	
Total	148,050,000			

Amherst Projects: Conceptual (Not Yet Authorized)

Conceptual (Not Yet Authorized) Projects	
Project	Adjusted Cost (\$)
Computer and Information Sciences Building	115,000,000
Engineering Building	100,000,000
Deferred Maintenance	100,000,000
Housing	150,000,000
Academic/Classroom/Office Renovations Pool	21,000,000
Morrill Science Ctr Renovations	48,800,000
Lederle Research Center Repairs and Renovations	41,250,000
Public Health and Health Sciences building	175,000,000
Campus Infrastructure FY22-26	100,000,000
Water Technology Piloting Facility	4,000,000
Instructional Facilities Improvements	25,000,000
Stockbridge School of Agriculture space and tech upgrades	5,000,000
Student Experience	160,000,000
Stem Facilities Renewal	150,000,000
Machmer Repairs	12,600,000
Total	1,207,650,000

Boston

- Relationship to Campus Strategic & Master Plans:

- As the last major component of the 2009 Boston Campus Master Plan, the SDQD project, is underway to stabilize the foundations and cure the crumbling underground parking structure issues under multiple buildings, Boston is embarking on a Campus Master Plan update for the upcoming decade.
- New capital projects are focusing on critical deferred maintenance.

- Focus on Deferred Maintenance:

- Boston's current capital projects are focusing on identified deferred maintenance in some of our older facilities.
- Projects are focusing on facades, HVAC, fire alarms and building controls upgrades.

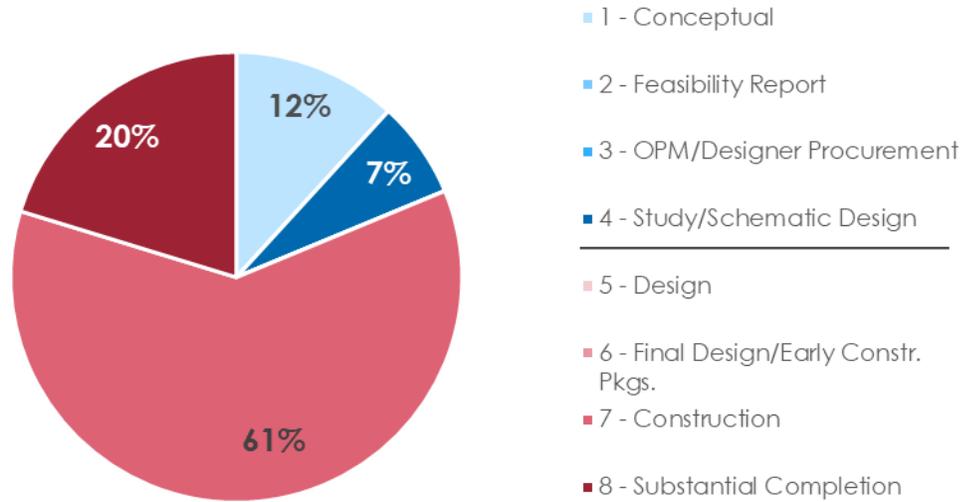
- Commitment to Sustainability:

- Boston has renewed its focus on sustainability and resiliency and has launched an Energy Master Plan.
- Other projects related to sustainability are sub metering of buildings and utilities and retro commissioning of the Integrated Sciences Center (ISC).
- Solar capacity has also been expanded on the top deck of the West Garage in conjunction with battery storage capacity tied to the Central Utility Plant.

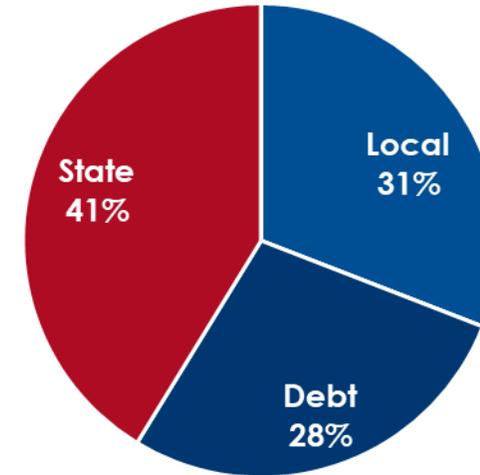
Boston: 17 Projects; \$241M; 13% of Capital Plan

81% of Projects in Construction or Substantial Completion

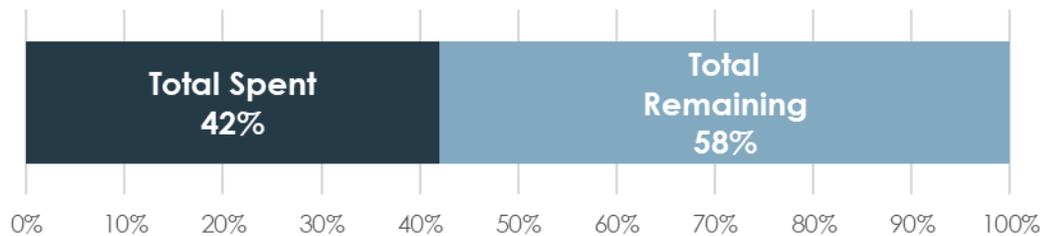
Projects by Phase



Funding Sources

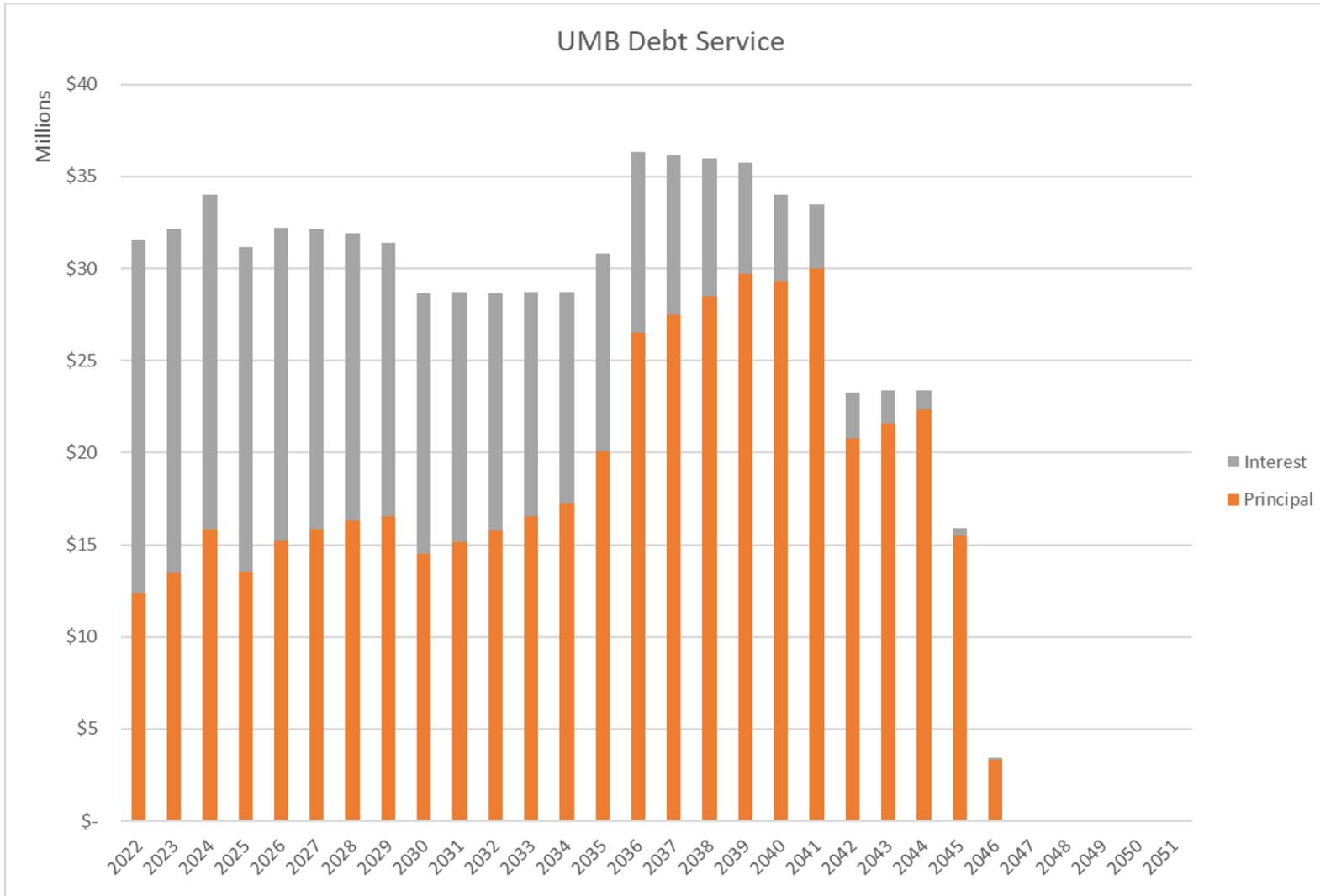


Project Spending



Key Financial Indicators	Actual					Projection	Budget	University
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY22
Debt Burden Ratio	4.9%	5.9%	6.3%	6.9%	7.5%	4.4%	6.7%	6.1%
Debt Service Coverage Ratio	1.0	1.1	1.4	1.6	1.7	4.5	3.0	2.5
Financial Leverage Ratio	0.15	0.12	0.12	0.16	0.19	0.19	0.19	0.46

*Multi-year financial forecast will be completed in December



Boston Projects

Traditional Projects				
Project	Adjusted Cost (\$)	Project Phase	Status	
Demolish Substructure, Science Center, and Pool (SDQD)	137,139,950	7 - Construction	Approved	
Renovations to Existing Academic Buildings (McCormack Hall and Wheatley Hall) (REAB)	44,600,000	8 - Substantial Completion	Approved	
Total	181,739,950			

Alternative Finance & Delivery Projects	
Project	Adjusted Cost (\$)
Calf Pasture Pump House	-
Total	-

President Projects				
Project	Adjusted Cost (\$)	Project Phase	Status	
Healey Library Transformer Replacement	2,166,750	1 - Conceptual	Authorized	
Healey Library Building Fire Protection	8,110,000	1 - Conceptual	Authorized	
Utility Plant: Add 3,200 Tons of Cooling Tower Capacity	9,000,000	1 - Conceptual	Authorized	
Quinn Administration and Service & Supply Buildings Fire Protection	3,025,000	1 - Conceptual	Authorized	
Wheatley Hall Façade Repairs	6,041,000	1 - Conceptual	Authorized	
Healey Ductwork Repair & Air Handling Unit Replacement	2,430,000	3 - Study / Schematic Design	Authorized	
McCormack Hall: Roof Replacement and Building Envelope Repairs Phase 2	3,000,000	4 - Study / Schematic Design	Authorized	
S&S Loading Dock Concrete Repairs	2,437,000	4 - Study / Schematic Design	Authorized	
Network Refresh Edge Switches	3,529,619	4 - Study / Schematic Design	Authorized	
Repairs to Falling Sections of Harborwalk	3,210,000	4 - Study / Schematic Design	Authorized	
Upgrade Building Controls Campus-Wide	2,140,000	4 - Study / Schematic Design	Authorized	
McCormack Hall: Roof Replacement and Building Envelope Repairs	6,500,000	7 - Construction	Approved	
Quinn Administration and Service & Supply Buildings Roof Replacement/Repair	3,165,022	7 - Construction	Approved	
IT Infrastructure Hub	4,150,000	8 - Substantial Completion	Approved	
Total	58,904,391			

Dartmouth

- Relationship to Campus Strategic & Master Plans:
 - UMass Dartmouth's FY19-FY23 Capital Plan is driven by the completion of the Campus Masterplan in late 2017. Central to the Campus Masterplan is our commitment to honor the legacy of the university's original architect while confronting our deferred maintenance challenge through the renovation and replacement of outdated facilities.

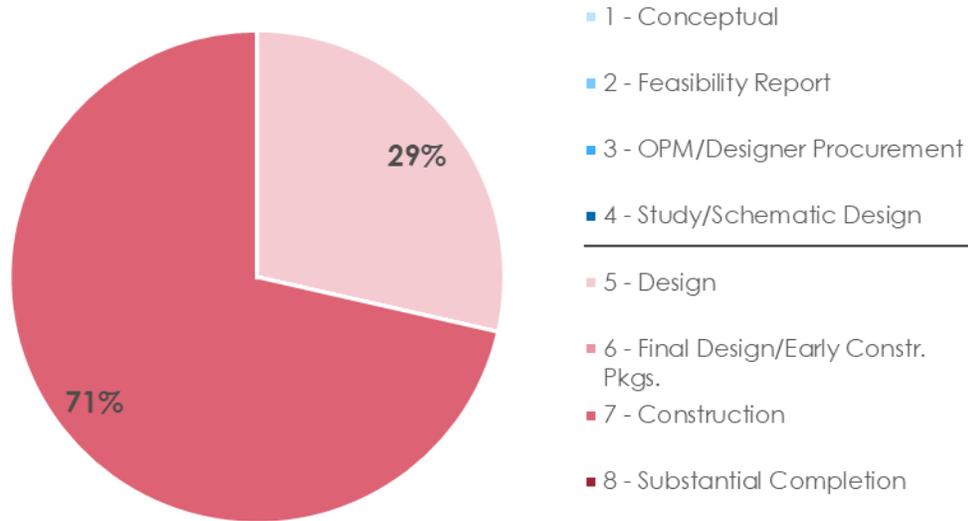
- Focus on Deferred Maintenance:
 - Our revised capital plan is focused solely on addressing and reducing the substantial deferred maintenance backlog that has grown steadily over the years. With many buildings (50%) over 50 years old, the life cycles of major building components are past due.

- Commitment to Sustainability:
 - The projects outlined in our capital plan will help address our energy use per square foot and help to bring it closer to the CBECS Weighted Campus Benchmark as we are addressing various envelope and HVAC systems on the campus. These projects will also help to reduce our greenhouse gas emissions and continue to "Lead by Example" so that other educational, commercial, and residential members of our community can follow our lead.

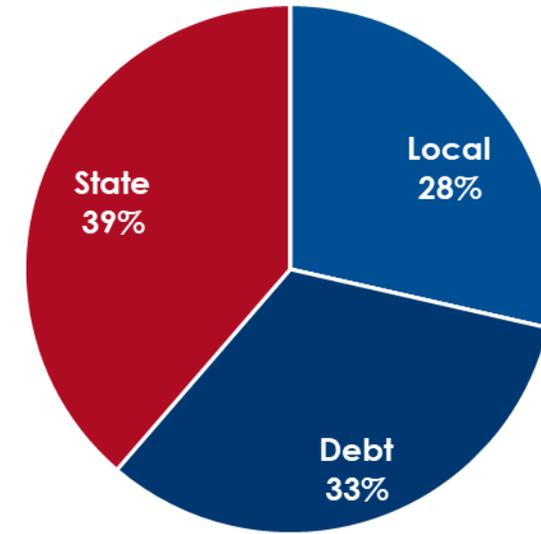
Dartmouth: 2 Projects; \$63M; 3% of Capital Plan

71% of Projects in Construction or Substantial Completion

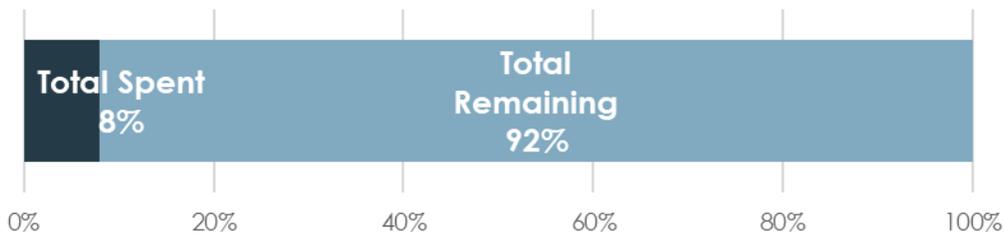
Projects by Phase



Funding Sources

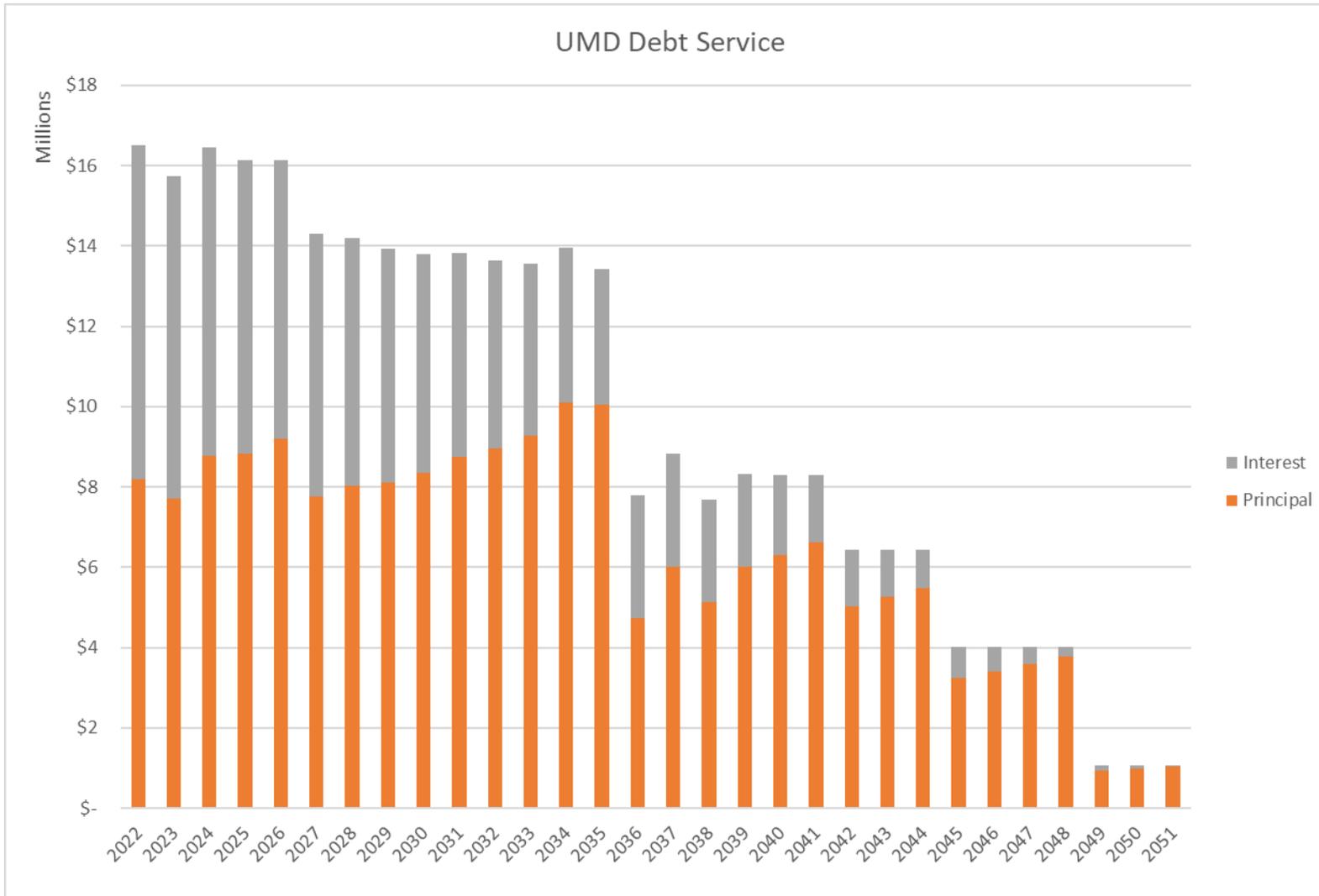


Project Spending



Key Financial Indicators	Actual					Projection	Budget	University
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY22
Debt Burden Ratio	8.4%	7.8%	7.6%	7.8%	7.7%	4.1%	6.5%	6.1%
Debt Service Coverage Ratio	1.4	1.8	1.3	1.6	1.5	3.0	1.7	2.5
Financial Leverage Ratio	0.20	0.21	0.28	0.19	0.20	0.20	0.20	0.46

*Multi-year financial forecast will be completed in December



Dartmouth Projects

Traditional Projects			
Project	Adjusted Cost (\$)	Project Phase	Status
Traditional First Year Residence Hall Demolition	18,000,000	5 - Design	Approved
SENG - Building System Project	45,000,000	7 - Construction	Approved
Total	63,000,000		

Conceptual (Not Yet Authorized) Projects	
Project	Adjusted Cost (\$)
STEM Discovery Facility	53,300,000
Law School - Deferred Maintenance	5,000,000
Claire T. Carney Library Exterior Envelope Repair	14,000,000
Central Administrative Services Building	12,690,000
LARTS HVAC Renovation/Upgrade	20,000,000
ADA Renovations Immediate Needs	2,184,000
Amphitheater Project	7,000,000
Multi Purpose Field House	20,800,000
Campus Entrance Building	45,000,000
New Campus Entrance Road	10,000,000
Roadway Repairs	6,220,000
Total	196,194,000

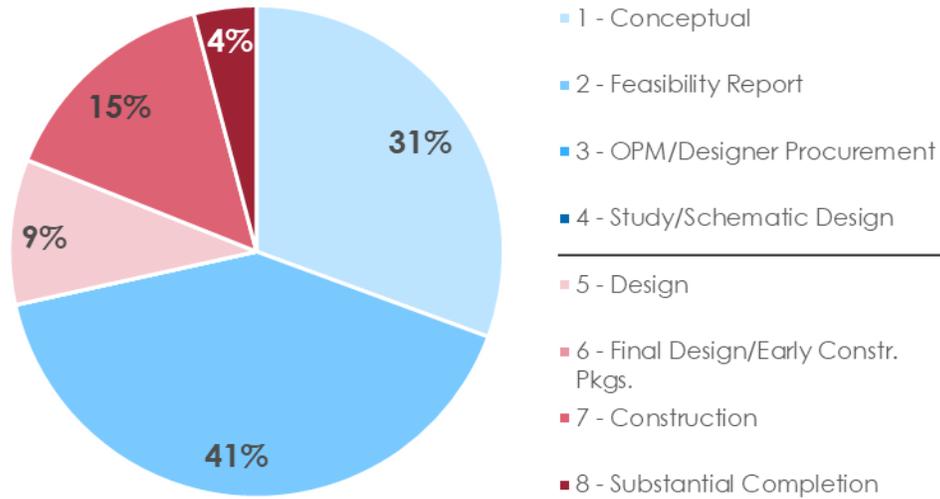
Lowell

- Relationship to Campus Strategic & Master Plans:
 - UMass Lowell's capital plan is fundamentally focused on providing the facilities necessary for it to sustain and build on its growth in national stature as a result of its successful 2020 Strategic Plan with projects that are consistent with its developing Post-COVID Master Plan.
- Focus on Deferred Maintenance:
 - Enrollment, research, and faculty growth projections confirm that the campus does not need to increase its gross square footage but must instead focus on improving the quality and condition of its current buildings, particularly to support the demands of contemporary research and modernized instruction in STEM fields. Consistent with these objectives, this capital plan will significantly reduce deferred maintenance backlogs.
- Commitment to Sustainability:
 - A core tenet of UMass Lowell's Alternative Energy Master Plan is to incorporate measures to conserve and reduce energy consumption and greenhouse gas emissions into every capital project. The major projects anticipated in the next five years include significant HVAC system and building envelope improvements in support of campus, UMass system, and the Commonwealth's sustainability goals.

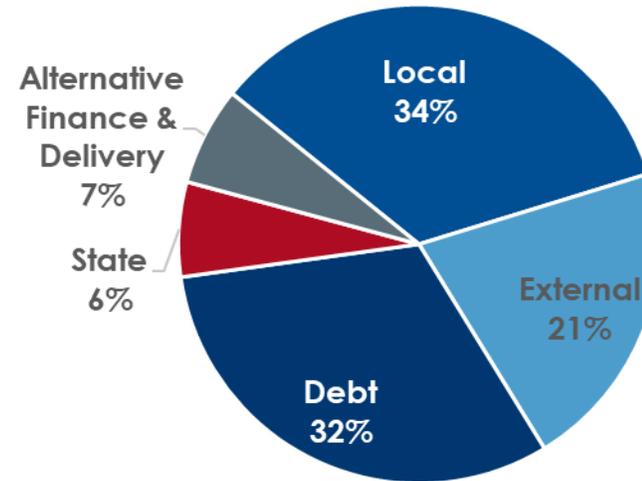
Lowell: 17 Projects; \$181M; 10% of Capital Plan

19% of Projects in Construction or Substantial Completion

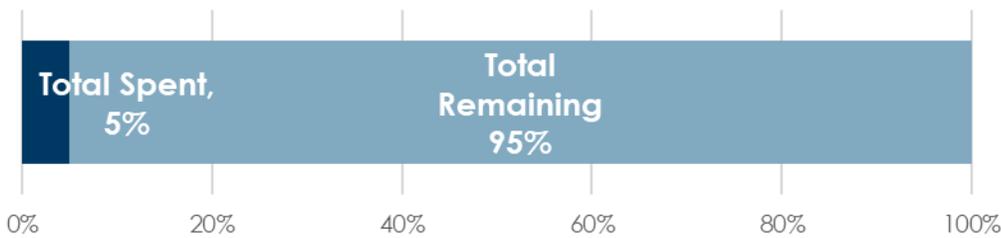
Projects by Phase



Funding Sources

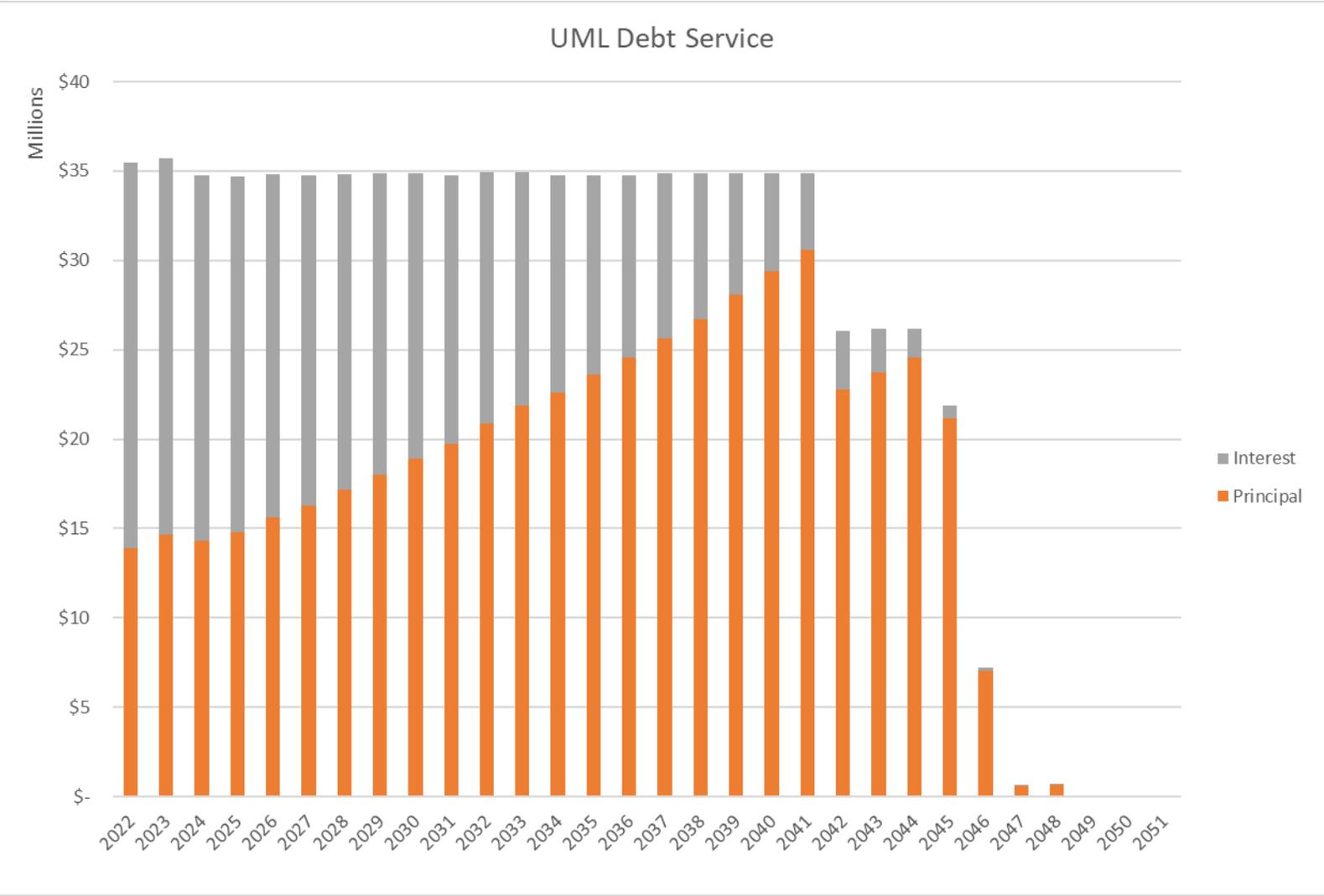


Project Spending



Key Financial Indicators	Actual					Projection	Budget	University
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY22
Debt Burden Ratio	7.5%	7.3%	7.4%	7.3%	6.8%	5.1%	6.5%	6.1%
Debt Service Coverage Ratio	1.7	2.0	1.9	2.0	1.9	3.0	1.1	2.5
Financial Leverage Ratio	0.27	0.25	0.24	0.24	0.26	0.27	0.26	0.46

*Multi-year financial forecast will be completed in December



Lowell Projects: Board & President

Traditional Projects			
Project	Adjusted Cost (\$)	Project Phase	Status
Ball Hall Comprehensive Renewal Phase I (Infrastructure & Envelope)	30,000,000	1 - Conceptual	Authorized
Olney Project A - Instructional Modernization	40,000,000	2 - Feasibility Report	Authorized
Weed Hall Renewal Phase I (includes NIH Grant Project Scope)	25,000,000	2 - Feasibility Report	Authorized
Critical Repair - Olsen Strategic Renovations, Repairs and Replacements	22,745,756	7 - Construction	Approved
Total	117,745,756		

Alternative Finance & Delivery Projects	
Project	Adjusted Cost (\$)
Tsongas Center Annex	12,000,000
Total	12,000,000

President Projects			
Project	Adjusted Cost (\$)	Project Phase	Status
Pinanski Radiation Physics Lab	2,000,000	1 - Conceptual	Authorized
Residence Hall & Student Affairs Renewal Program Phase I	9,000,000	1 - Conceptual	Authorized
Dugan - Art & Design 3D Studio Renovation	3,000,000	1 - Conceptual	Authorized
Olney Laser Lab	2,200,000	1 - Conceptual	Authorized
South Campus Electrical & Steam Infrastructure	5,500,000	1 - Conceptual	Authorized
Costello D1 Improvements Phase 2 - Fill & Repurpose Pool Area	4,000,000	2 - Feasibility Report	Authorized
Southwick Hall 2nd & 3rd Floors	3,500,000	5 - Design	Approved
Critical Repair Tsongas HVAC	9,000,000	5 - Design	Approved
Interdisciplinary Robotics Lab	3,625,000	5 - Design	Approved
Concordia Fire Protection, Roof and Elevator	2,300,000	7 - Construction	Approved
Costello Basketball Suite	4,400,000	8 - Substantial Completion	Approved
Alumni Refresh	2,500,000	8 - Substantial Completion	Approved
Total	51,025,000		

Lowell Projects: Conceptual (Not Yet Authorized)

Conceptual (Not Yet Authorized) Projects	
Project	Adjusted Cost (\$)
Renovate Alumni & Lydon Stacks	12,000,000
Weed Hall Renewal Phase II	25,000,000
Olney Project B - Building Infrastructure (State Major Capital Request)	35,000,000
Ball Hall Comprehensive Renewal Phase II	45,000,000
Residential Hall Comprehensive Renewal Program - Future Phases	100,000,000
Hamilton Canal District Lab P3	30,000,000
Modernization and Improvement of North Campus Teaching and Research	100,000,000
Durgin Hall Renewal & Addition	65,000,000
O'Leary Renewal	22,000,000
Weed Hall Renewal	15,000,000
Costello and Other Athletics (D1) Improvements	3,750,000
Falmouth - Advanced Manufacturing Renovation/Makerspace Expansion	6,000,000
Wannalancit Façade Repointing	4,000,000
North Quad Infrastructure Renewal (HVAC & Fire Protection)	12,000,000
South Campus Master Plan - Initial Space & Mall Improvements - Phase 1	20,000,000
Critical Repair Tsongas HVAC - Phase II	6,000,000
Total	500,750,000

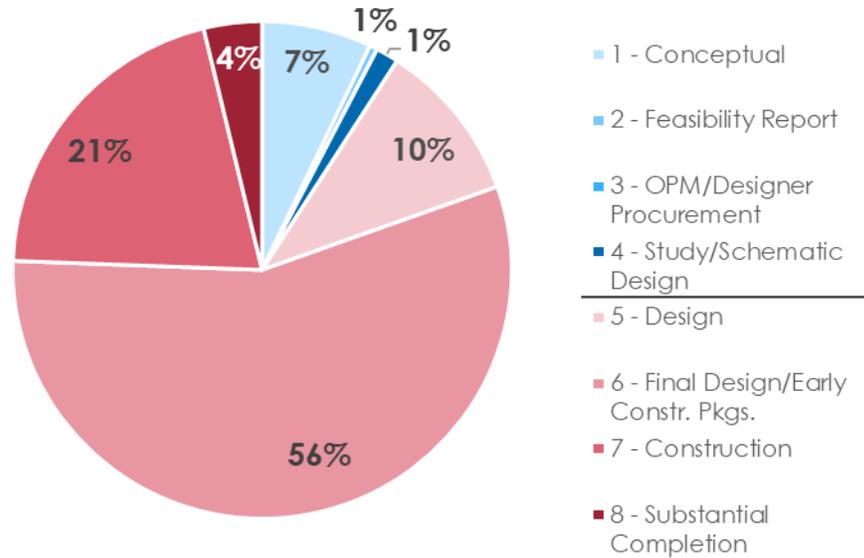
Chan Medical School

- Relationship to Campus Strategic & Master Plans:
 - The University of Massachusetts Chan Medical School's FY22-26 Capital Plan is informed by two key institutional documents: 1) the UMMS Impact 2025 Strategic Plan; and 2) the UMMS Master Plan.
 - The strategic plan outlines a path for the campus to advance the health and well-being of the people of the Commonwealth and the world through pioneering advances in education, research and health care delivery. UMMS Master Plan provides the Medical School with a functional and detailed blueprint for space planning and construction that is based on growth assumptions and institutional goals that considers the needs for academics and teaching; the research enterprise; Commonwealth Medicine; and Mass Biologics.
- Focus on Deferred Maintenance:
 - Management has analyzed capital needs for existing backlog of deferred maintenance and repair projects. The Campus Strategic & Master Plans focuses on optimizing space and reducing the deferred maintenance backlog while balancing funding resources.
- Commitment to Sustainability:
 - The University of Massachusetts Medical School's commitment to sustainability represented by the 2021 Sustainability Climate Action Plan and the schools support of Executive Order 594: Decarbonizing and minimizing environmental impacts of State government.
 - In practice, this commitment is highlighted in the design of the New Educational Research Building which features energy efficiency measures to reduce energy use intensity, and a geothermal systems which will reduce greenhouse gas emissions from the building by 55 percent.

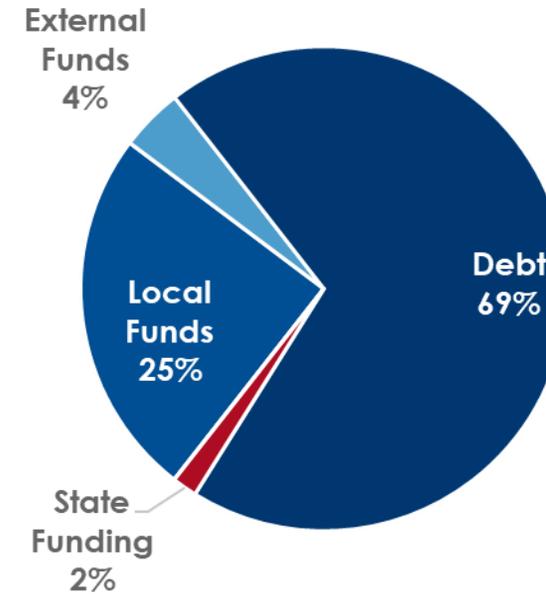
Medical School: 23 Projects; \$595M; 32% of Capital Plan

24% of Projects in Construction or Substantial Completion

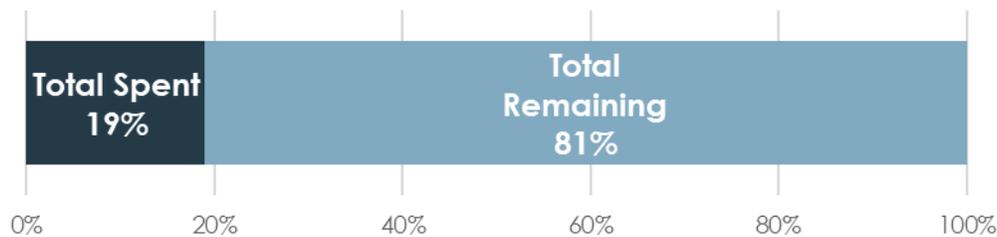
Projects by Phase



Funding Sources

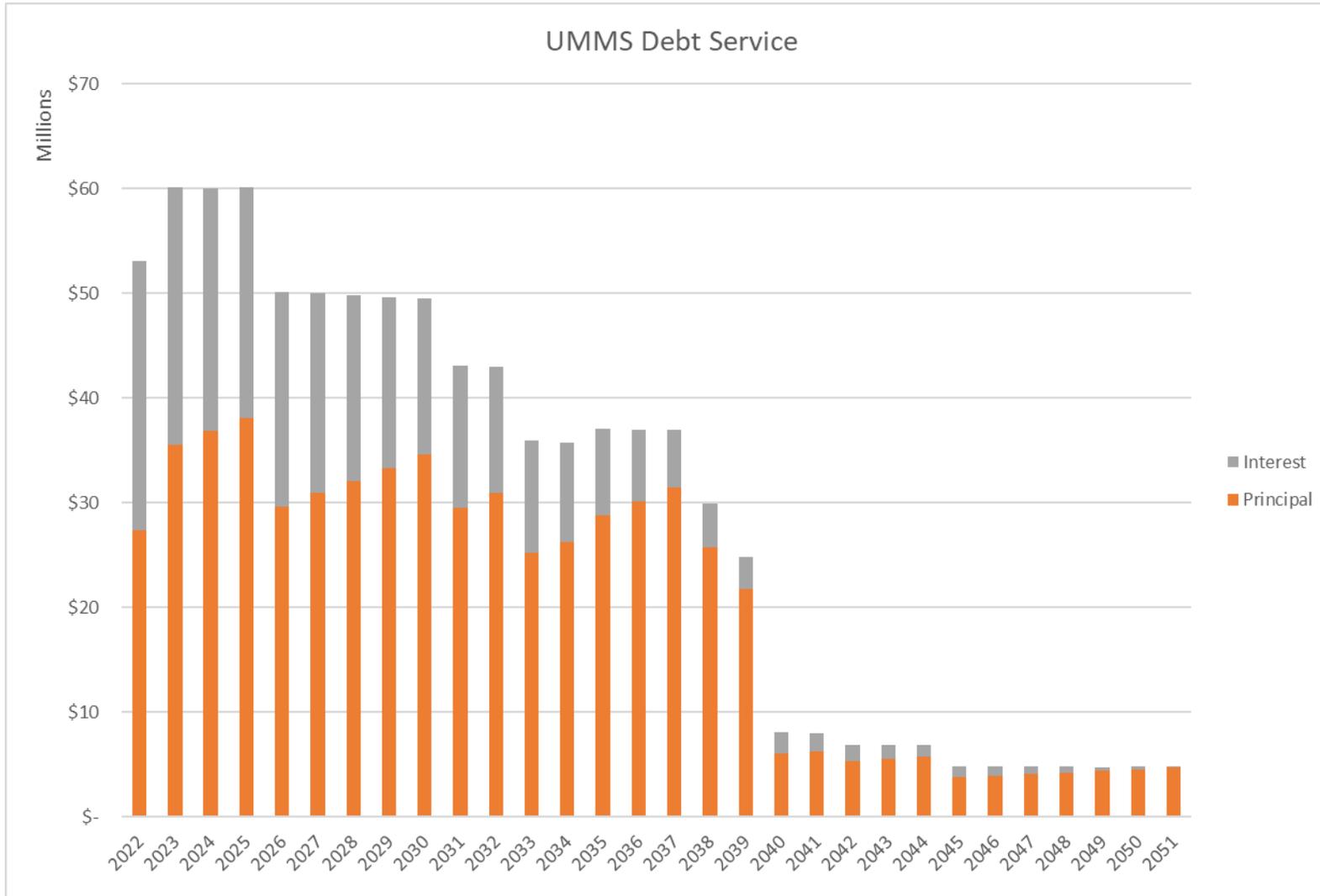


Project Spending



Key Financial Indicators	Actual					Projection	Budget	University
	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY22
Debt Burden Ratio	5.2%	6.0%	5.1%	5.5%	4.9%	2.3%	5.2%	6.1%
Debt Service Coverage Ratio	1.7	2.2	2.3	2.6	2.7	5.1	2.1	2.5
Financial Leverage Ratio	0.34	0.42	0.64	0.72	0.64	0.71	0.65	0.46

*Multi-year financial forecast will be completed in December



Medical School Projects: Board & President

Traditional Projects			
Project	Adjusted Cost (\$)	Project Phase	Status
Library repurposing and renovations	5,500,000	1 - Conceptual	Authorized
Departmental equipment purchases	10,000,000	1 - Conceptual	Authorized
Parking Lot Maintenance - Main Campus	10,840,000	1 - Conceptual	Authorized
Power Plant Expansion	50,000,000	5 - Design	Approved
New Education and Research Facility	325,000,000	6 - Final Design / Early Construction Packages	Approved
VA-1 Expansion to South Road Garage	10,000,000	7 - Construction	Approved
VA-1 Worcester VA Community Based Outpatient Clinic - New Facility - Phase 1	78,000,000	7 - Construction	Approved
A Level Renovations (HVAC, Cage Wash, and Holding Rooms)	14,500,000	7 - Construction	Approved
REN - 4 Clinical Wing Lab to Office Conversions (Floor 2 - 7)	15,500,000	8 - Substantial Completion	Approved
Total	519,340,000		

President Projects			
Project	Adjusted Cost (\$)	Project Phase	Status
Gnotobiotics Core (LRB)	3,000,000	1 - Conceptual	Authorized
Clinical Wing Renovation - 4th Phase (2nd Floor)	7,000,000	1 - Conceptual	Authorized
Clinical Wing Restroom Upgrades (14 Rooms)	3,000,000	1 - Conceptual	Authorized
Basic Wing Restroom Upgrade (14 Rooms)	3,000,000	1 - Conceptual	Authorized
Enhance chilled water loop pump/controls	3,000,000	2 - Feasibility Report	Authorized
Medical School Elevator Replacement	6,000,000	4 - Study / Schematic Design	Authorized
Childcare Expansion	2,800,000	4 - Study / Schematic Design	Authorized
Basic Wing Substations, Risers and Electrical Room Replacements	8,300,000	5 - Design	Approved
E/M DM - 5 School HVAC Upgrades / Replacements - Amphitheater Mechanical Systems and AHU	4,000,000	5 - Design	Approved
Student Wing Substation, Risers and Electrical Room Replacements	8,300,000	6 - Final Design / Early Construction Packages	Approved
Clinical Wing Substations, Risers and Electrical Room Replacements	8,300,000	7 - Construction	Approved
Install Chiller 6	6,000,000	7 - Construction	Approved
Clinical Wing - 3rd Phase	6,000,000	7 - Construction	Approved
E/M DM - 5 School HVAC Upgrades / Replacements - Clinical Wing Mechanical Systems and AHU	7,000,000	8 - Substantial Completion	Approved
Total	75,700,000		

Medical School Projects: Conceptual (Not Yet Authorized)

Conceptual (Not Yet Authorized) Projects	
Project	Adjusted Cost (\$)
Misc. Renovations WCCC	10,000,000
South Street Building 1 Renovations	7,000,000
Campus Electrical Loop Development	4,000,000
LP Boiler Re-tubing	4,000,000
Balance of Plant Controls (BOP) Upgrade	2,257,500
Neuro Nexus, A Level Renovations	23,000,000
E/M DM - 5 School HVAC Upgrades / Replacements - Basic Wing Mechanical Systems and AHU	14,000,000
Total	64,257,500