

**REVISED**  
**3/4/2022**

Board of Trustees

**Finance, Facilities & Technology Committee**  
March 10, 2022 at 9:00 am  
Zoom Meeting – No Physical Location Available

The public is invited to view the meeting on YouTube. The link to the Board of Trustees YouTube page can be found the Board website: <https://www.maine.edu/board-of-trustees/>

**AGENDA**

- 9:00am – 9:05am Call the meeting to order and Roll Call
- 9:05am – 9:15am  
TAB 1 Internal Loan Request, UMA
- 9:15am – 9:25am  
TAB 2 Medical Laboratory Technology Space Renovation, UMA
- 9:25am – 9:35am  
TAB 3 Camden Hall Renovation, UMA
- 9:35am – 9:45am  
TAB 4 Extension of the Cyberbit Range, UMA
- 9:45am – 9:55am  
TAB 5 Hannaford Field Turf Replacement, USM
- 9:55am – 10:05am  
TAB 6 Acceptance of Aroostook Farm Maine Potato Board Building gift; UM
- 10:05am – 10:15am  
TAB 7 Secure Laboratory, Advanced Structures and Composite Center (ASCC), UM
- 10:15am – 10:25am  
TAB 8 Approval of FY2021 Maine Economic Improvement Fund Annual Report
- 10:25am – 10:30am  
TAB 9 300 Fore St Renovation and Fit Out Increase, University of Maine and University of Maine School of Law
- 10:30am – 10:35am  
TAB 16 Adaptive reuse of Coburn and Holmes Hall – Public-Private Partnership Authorization Increase, UM
- 10:35am – 10:45am  
TAB 10 Review of IT Projects with a Value of \$250,000 or Greater
- 10:45am – 10:55am  
TAB 11 State of IT 2021 Report
- 10:55am – 11:10am  
TAB 12 Robie-Andrews Hall Revitalization Project, USM

11:10am – 11:20am  
TAB 13      **Capital Project Status Report and Bond Projects Update, UMS**

11:20am – 11:50am  
TAB 14      **Gordian Annual Facilities Report, UMS**

11:50am – 12:00pm  
TAB 15      **University of Maine Rolling Capital Master Plan Update**

Action items within the Committee purview are noted in green.

Items for Committee decisions and recommendations are noted in red.

*Note: Times are estimated based upon the anticipated length for presentation or discussion of a particular topic. An item may be brought up earlier or the order of items changed for effective deliberation of matters before the Co*

University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Internal Loan Request, UMA

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:**

**BOARD ACTION:** X

**BOARD POLICY:**

712 – Debt Policy

701 – Budgets, Operating & Capital

**UNIFIED ACCREDITATION CONNECTION:**

Increase enrollment

Improve student success and completion

**BACKGROUND:**

The University of Maine System acting through the University of Maine at Augusta (UMA) requests authorization to fund two capital projects through an internal loan of up to \$3,000,000.

UMA plans to renovate roughly 3,800 square feet in Camden Hall on the Bangor campus in support of its Veterinary Technology academic program with a project budget of \$1,600,000. UMA also plans to renovate roughly 4,000 square feet on the Augusta campus in support of its Medical Laboratory Technology academic program with a budget of \$1,650,000.

In addition to the loan proceeds, UMA will utilize E&G capital funds to meet the total cost of the two projects. Debt service for the internal loan has been included in UMA's proposed FY23 budget.

This request is pursuant to Board Policy 712, which requires that debt and related agreements be approved by the Board. In this case the Committee recommendation will be forwarded to the Board of Trustees Consent Agenda at the March 28th, 2022 Board meeting.

**TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities & Technology Committee approves the following resolution to be forwarded to the Consent Agenda for Board of Trustees approval at the March 27-28, 2022 Board meeting:

That the Board of Trustees accepts the recommendation of the Finance, Facilities & Technology Committee and authorizes the University of Maine System acting through the University of Maine at Augusta to issue an internal loan of up to \$3,000,000 for renovation costs in support of its Veterinary Technology and Medical Laboratory Technology academic programs.

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University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Medical Laboratory Technology Space Renovation, UMA

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:**

**BOARD ACTION:** X

**BOARD POLICY:**

701 – Budgets, Operating & Capital

**UNIFIED ACCREDITATION CONNECTION:**

Affiliation agreement with the University of Maine at Presque Isle

Increase enrollment

Improve student success and completion

**BACKGROUND:**

**a. Summary of the request**

The University of Maine System acting through the University of Maine at Augusta (UMA) requests authorization to spend up to \$1,650,000 to create a new Medical Laboratory Technology space in an appropriate location on the Augusta campus. Funding for this project will be mainly through an internal loan.

**b. Overall requested budget and funding source**

The overall project budget is \$1,650,000 to be funded mainly from the proceeds of an internal loan. This request is pursuant to Board Policy 701, which requires projects with a total cost of more than \$500,000 to be considered by the Board of Trustees or its Finance, Facilities & Technology Committee. In this case the Committee recommendation will be forwarded to the Board of Trustees Consent Agenda at the March 27-28, 2022 Board meeting.

**c. More detailed explanation of rationale for project and metrics for success of the project (ROI or other)**

The demand for qualified medical laboratory technicians has never been greater. Graduates of the Medical Laboratory Technology (MLT) academic program have numerous job opportunities awaiting them. UMA very much needs to expand its program by enrolling a greater number of students, and this expansion can occur only with adequate and appropriate facilities. It is anticipated that this expansion will allow the program to increase enrollment by over 70% to 24 initially and possibly more in the future.

**d. Explanation of the scope and substance of the project as needed to supplement (a) and (c) above.**

Roughly 4,000 square feet of space will be renovated and developed into a laboratory for the MLT program. The scope of the work may include extensive demolition; structure reinforcement; plumbing; fire protection; HVAC; electrical; framing; doors and door

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hardware; interior finishes; toilets, lavatories; sinks; eyewash stations; mechanical systems; and audio/visual components. The final location is still under review.

**e. Changes, if any, in net square footage or ongoing operating costs resulting from the project**

No additional square footage is being added. Depending on the location, any additional operational expense should be covered by additional tuition and fee revenue.

**f. Budget for the project and further elaboration on funding source and selection as needed to supplement (b) above**

The project is contingent upon Board of Trustees approval of an internal loan or other financing. Repayment of the loan is already built into the UMA FY23 budget proposal. In addition, E&G funding totaling up to \$350,000 has been set aside to cover costs related to this project and the Camden Hall Veterinary Technology renovation project.

**g. Alternatives that were considered to meet the need being addressed by this project**

Conversations took place with a potential donor to construct an allied health wing onto Jewett Hall. Those efforts were not successful. Currently a diligent review of campus spaces is underway to find the most suitable location.

**h. Timeline for start, occupancy and completion**

Project to begin after the bidding process with the goal of completion in time for the beginning of the fall 2023 semester.

**i. Timeline for further consideration or action anticipated to be needed by the Board or its committees regarding this project if full authority is not being requested from the outset.**

No further Board action is anticipated at this time if financing is approved.

**j. Additional information that may be useful to consideration of item.**

It is anticipated that the renovation will result in a positive impact on UMA's net asset value.

**TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities & Technology Committee approves the following resolution to be forwarded to the Consent Agenda for Board of Trustees approval at the March 27-28, 2022 Board meeting.

That the Board of Trustees accepts the recommendation of the Finance, Facilities & Technology Committee and authorizes the University of Maine System acting through the University of Maine at Augusta to expend up to \$1,650,000 to renovate existing space on the Augusta campus to develop a laboratory for the Medical Laboratory Technology academic program.

University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Camden Hall Renovation, UMA

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:**

**BOARD ACTION:** X

**BOARD POLICY:**

701 – Budgets, Operating & Capital

**UNIFIED ACCREDITATION CONNECTION:**

Increase enrollment

Improve student success and completion

**BACKGROUND:**

**a. Summary of the request**

The University of Maine System acting through the University of Maine at Augusta (UMA) requests authorization to spend up to \$1,600,000 to renovate the second floor of Camden Hall on the Bangor campus in support of the expansion of the Veterinary Technology academic program. Funding for this project will be mainly through an internal loan.

**b. Overall requested budget and funding source**

The overall project budget is \$1,600,000 to be funded from the proceeds of an internal loan and from E&G capital funds. This request is pursuant to Board Policy 701, which requires projects with a total cost of more than \$500,000 to be considered by the Board of Trustees or its Finance, Facilities & Technology Committee. In this case the Committee recommendation will be forwarded to the Board of Trustees Consent Agenda at the March 27-28, 2022 Board meeting.

**c. More detailed explanation of rationale for project and metrics for success of the project (ROI or other)**

Veterinarians are in great need of technicians, particularly during this pandemic time where more people have adopted pets. Graduates of the program have job opportunities awaiting them. This project will provide the opportunity for expansion and to increase the enrollment by about 12% to a total of 72 students in the near future with possible increases later.

**d. Explanation of the scope and substance of the project as needed to supplement (a) and (c) above.**

Roughly 3,800 square feet of the second floor of Camden Hall will be renovated to include a classroom; computer lab; changing rooms; restrooms with showers; and a break room. The remaining portion of the second floor will remain unfinished. Included in the project will be fire protection; plumbing; HVAC; electrical; communications; electronic safety & security; and all finish work.

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**e. Changes, if any, in net square footage or ongoing operating costs resulting from the project**

No additional square footage is being added. There will be increased costs due to increased utilization, which will be more than covered by additional tuition and fee revenue.

**f. Budget for the project and further elaboration on funding source and selection as needed to supplement (b) above**

The project is contingent upon Board of Trustees approval of an internal loan or other financing. Repayment of the loan is already built into the UMA FY23 budget proposal. In addition, E&G funding totaling up to \$350,000 has been set aside to cover costs related to this project and the Medical Laboratory Technology project.

**g. Alternatives that were considered to meet the need being addressed by this project**

The second floor of Camden Hall is directly above the existing space occupied by the Veterinary Technology academic program. This space is not currently utilized and thus will not disrupt other activity.

**h. Timeline for start, occupancy and completion**

Project to begin after the bidding process with completion in time for the beginning of the fall 2023 semester.

**i. Timeline for further consideration or action anticipated to be needed by the Board or its committees regarding this project if full authority is not being requested from the outset.**

No further Board action is anticipated at this time if financing is approved.

**j. Additional information that may be useful to consideration of item.**

There will be a definite positive impact on the net asset value of Camden Hall.

**TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities & Technology Committee approves the following resolution to be forwarded to the Consent Agenda for Board of Trustees approval at the March 27-28, 2022 Board meeting.

That the Board of Trustees accepts the recommendation of the Finance, Facilities & Technology Committee, and authorizes the University of Maine System acting through the University of Maine at Augusta to expend up to \$1,600,000 to renovate existing space in Camden Hall to provide expansion opportunities for the Veterinary Technology academic program.

University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Extension of the Cyberbit Range, UMA

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:**

**BOARD ACTION:** X

**BOARD POLICY:**

701 – Budgets, Operating & Capital

**UNIFIED ACCREDITATION CONNECTION:**

Utilized by other UMS Institutions with Cybersecurity programs (USM, UMPI)

**BACKGROUND:**

At its January 28, 2019 meeting, the Board of Trustees authorized the expenditure of \$855,000 over three years for UMA’s acquisition of the Cyberbit Range security training and simulation platform. This platform has provided a virtual environment for teaching and learning in cyberwarfare training and cyber technology development. Graduating students are highly marketable with an estimated cybersecurity workforce gap in the Northeast United States approaching 50,000 positions currently.

UMA wishes to extend its agreement with Cyberbit for an additional three years as well as add ProTools; upgrade hardware; utilize the services of a Customer Success Manager; and provide 100 student labs. The cost is \$280,000 for the first year; \$380,000 for the second year; and \$380,000 for the third year for a total three year cost of \$1,040,000 to be funded with E&G funds.

This request is pursuant to Board Policy 701, which requires projects with a total cost of more than \$500,000 to be considered by the Board of Trustees or its Finance, Facilities & Technology Committee. In this case the Committee recommendation will be forwarded to the Board of Trustees Consent Agenda at the March 27-28, 2022 Board meeting.

The addition of ProTools enables the Cyber Range to create actual cybersecurity protection plans specifically designed for a particular company, government entity, or organization. Such development provides “real” training for students and offers the opportunity for revenue generation. Majors in this area produce over 2000 credit hours in Computer Science and over 3000 credit hours in Cyber Security. The numbers continue to increase each year. The continuation of the Cyber Range enhances the ability to attract and retain students.

**TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities & Technology Committee approves the following resolution to be forwarded to the Consent Agenda for Board of Trustees approval at the March 27-28, 2022 Board meeting:

That the Board of Trustees accepts the recommendation of the Finance, Facilities & Technology Committee and authorizes the University of Maine System acting through the University of Maine at Augusta to expend up to \$1,040,000 for the extension of the Cyber Range security training and simulation platform.

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University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Hannaford Field Turf Replacement, USM

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:**

**BOARD ACTION:** X

**BOARD POLICY:**

701 –Budgets, Operating & Capital

**UNIFIED ACCREDITATION CONNECTION:**

N/A

**BACKGROUND:**

a. **Summary of the request:**

The University of Maine System acting through the University of Southern Maine is requesting authorization to spend up to \$900,000 to replace the turf on Hannaford Field on the Gorham campus. This field is used for intercollegiate soccer, field hockey, and lacrosse. The project would be funded by Capital Reserves and University E&G funds.

b. **Overall requested Budget and Funding Source:**

This request is pursuant to Board of Trustees Policy 701 which requires projects with a total cost of more than \$500,000 to be considered by the Board of Trustees or its Finance, Facilities and Technology Committee. In this case, the authorization is within the purview of the Committee. The project budget is estimated at \$900,000 and would be funded by Capital Reserves (\$700,000) and University E&G (\$200,000) funds.

c. **More detailed explanation of rationale for project and metrics for success of the project (ROI or other):**

The project will enhance the safety of the field by installing additional and taller ball netting on the end of the field where pedestrians approach from the parking area. In addition, the pedestrian walkways will be widened and modified to provide access that is more accessible for spectators. Having a fully functional and safe Hannaford field allows the University of Southern Maine to continue to field intercollegiate soccer, field hockey, and lacrosse teams in addition to numerous other athletic events.

d. **Explanation of the scope and substance of the project as needed to supplement (a) and (c) above:**

The existing turf field has reached the end of its service life and may soon become a safety hazard. Annual testing is conducted on artificial turf fields to ensure impact safety for athletes. This testing known as Gmax cannot exceed 200, at which point the risk to athletes is so great that the NCAA does not permit intercollegiate sports. The field was tested at 135 in 2020 and then tested 175 in 2021. Given the substantial increase in Gmax values over the last two years and the higher risk for potential failure of the field, the

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University engaged Gale Associates to conduct a study on practical options to extend the life of the field and to develop a plan for replacement.

e. **Changes, if any, in net square footage or ongoing operating costs resulting from the project:**

No changes in square footage or operating costs

f. **Budget for the project and further elaboration on funding source and selection as needed to supplement (b) above). N/A**

g. **Alternatives that were considered to meet the need being addressed by this project:**

The University does not have the additional athletic field space required to move the sports to another field. Spot repairs have been utilized to extend the life of the field.

h. **Timeline for start, occupancy, and completion:**

The level of necessary design is minimal and was accomplished as a part of the CPPM-led safety study to evaluate the field and provide options. Subject to Committee approval, construction can start as early as May 2022, at the end of the semester, with completion estimated to be completed in six weeks. This will allow athletic events to occur during the summer.

i. **Timeline for any further consideration or action anticipated to be needed by the Board or its committees regarding this project if full authority is not being requested from the outset.**

No further consideration is anticipated at this time

j. **Additional information that may be useful to consideration of the item:**

The primary driver for this project is safety. To that end, the new selected playing surface comes with a pad that guarantees the Gmax will not exceed 200. The addition of safety ball netting on the east side of the field is crucial for pedestrian safety as this is the primary approach path from the parking areas. Pedestrians have been injured in the past due to errant unseen balls. The pedestrian walkways are narrow and have impediments (raised electrical junction boxes) that prevent full access to the sidelines of the field where spectators assemble. This project would widen those walkways and resolve the raised impediments.

**TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees acting through the Finance, Facilities and Technology Committee authorizes the University of Maine System acting through the University of Southern Maine to spend up to \$900,000 for the replacement of turf at Hannaford Field and associated safety and accessibility improvements. The project would be funded by Capital Reserves and University E&G funds.

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University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Acceptance of Aroostook Farm Maine Potato Board Building gift, UM

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:**

**BOARD ACTION:** X

**BOARD POLICY:**

801 – Acquisition of Real Property  
Increase in Square Footage

**UNIFIED ACCREDITATION CONNECTION:**

Non-applicable

**BACKGROUND:**

**a. Summary of the request**

The University of Maine System, acting through the University of Maine (UM) requests authorization to accept the donation of the 9,500 square foot Maine Potato Board Building located on the University Aroostook Research Farm in Presque Isle. Estimated value of the building is approximately \$400,000.

This request is pursuant to Board Policy 801 Acquisition of Real Property, which requires Board approval for acquisition of real property with a cost exceeding \$50,000 prior to transfer of title.

**b. More detailed explanation of rationale for project and metrics for success of the project (ROI or other)**

The University of Maine System in May of 2002 leased approximately one acre of land located on the University of Maine Agricultural and Forest Experiment Station Farm in Presque Isle to the Maine Potato Board (MPB) to construct a 9,500 square foot potato storage research facility. The terms of the land lease at a cost of \$1 for the first year, was for an initial twenty years with an option to extend for an additional twenty years. The initial lease term expires May of 2022. MPB does not wish to renew the land lease. MPB voted unanimously in November of 2021 to offer the transfer of the building to the University at zero cost. Upon termination of the lease, per the lease agreement, MBP has one-year to dispose of the building, including an offer of first refusal to the university. Estimated value of the building is approximately \$400,000. The University currently maintains, operates, and utilizes the building for research. MPB is not currently, nor planning to, utilize the building.

After due diligence and careful review with President Ferrini-Mundy, in accordance with Board Policy Section 801 and APL II-G, the Treasurer recommends accepting the gift of the Maine Potato Board Building.

**c. Changes, if any, in net square footage or ongoing operating costs resulting from the project.**

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The building is approximately 9,500 square feet and would be added to the University's total square footage. The University currently maintains, operates and utilizes the building for research, so no increased operating costs are anticipated.

**d. Additional information that may be useful to consideration of the item.**

The University will utilize this building as part of the modernization of the Aroostook Farm to support potato and other ground crops grown on the farm for research by the University, Cooperative Extension, USDA, and University of Presque Isle. This plan is supported by Dean Rowland.

**TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities, & Technology Committee, approves the following resolution to be forwarded to the Consent Agenda for Board of Trustee approval at the March 27-28, 2022 Board Meeting.

That the Board of Trustees accepts the recommendation of the Finance, Facilities, & Technology Committee, and approves the transfer of ownership of the 9,500 square foot Maine Potato Board Research Building located on the University of Maine Aroostook Farm, from the Maine Potato Board to the University of Maine System.

University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Secure Laboratory, Advanced Structures and Composite Center (ASCC), UM

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:**

**BOARD ACTION:** X

**BOARD POLICY:**

701 – Budgets, Operating & Capital

**UNIFIED ACCREDITATION CONNECTION:**

The Secure Lab will be located at the University of Maine campus and will include highly-specialized research facilities and equipment that can be leveraged for researchers across the University of Maine System.

**BACKGROUND:**

**a. Summary of the request.**

The University of Maine System acting through the University of Maine requests authorization to expend up to \$2,451,268 to construct approximately 4,000 square feet of space mostly within the Advanced Structures and Composites Center (ASCC) located at the University of Maine to create a secured clean laboratory for textiles research. Funds to complete construction are fully available and committed to this project through several contracts with the U.S. Army Natick Soldiers System Center (Natick).

**b. Overall requested budget and funding source.**

This request is pursuant to Board of Trustees Policy 701 which requires projects with a total cost of more than \$500,000 to be considered by the Board of Trustees or its Finance, Facilities and Technology Committee. In this case the Committee's recommendation will be forwarded to the Consent Agenda for Board of Trustee approval at the March 2022 Board meeting. The budget for this project is funded through a multi-year, multi-million-dollar contract with the U.S. Army Natick Soldier System Center. The additional square footage is dedicated to and in support of research activity so does not require Trustee authorization.

**c. More detailed explanation of rationale for project and metrics for success of the project (ROI or other).**

This project is the second and final part of a two-phase construction project that included secure offices and secure lab space. An initial phase of this project included construction of secure offices within the ASCC. That phase is now completed and the offices are occupied. This next phase will provide for construction of the secured clean lab space. This will include adding a 2nd floor above the existing, high bay, Thermoplastics Lab located at the ASCC.

This lab will allow expanded textile research and open new funding opportunities for textile and deployable shelter research with Natick and other funding agencies. The project is necessary to execute research tasks focused on developing advanced textile materials including photovoltaic wires and color changing filaments.

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Textile technologies are used throughout many ASCC research projects and the proposed lab will allow these projects to be supported internally and expand the options of what can be explored with further research. Capabilities and projects will further the development of green and bio-friendly materials for use in textiles, lightweight structures and 3D printing. “Smart” material systems will be developed, refined, and prototyped to the level of a commercial product.

**d. Explanation of the scope and substance of the project as needed to supplement (a) and (c) above.**

The second-floor construction above the existing Thermo-Plastic / Robotics Laboratory will include installation of a structural steel frame and concrete deck, stairs, mechanical, electrical, life safety/fire alarm, sprinkler, AV/IT, and architectural finishes to develop the second-floor space and all necessary requirements for continued operation of the first-floor laboratory.

**e. Changes, if any, in net square footage or ongoing operating costs resulting from the project.**

The design being developed will create an estimated 4,000 square feet, most of which is within the existing building footprint. Any increases in operating costs will be covered by ASCC contracts which support these costs through Facilities and Administrative (F&A) rates charged on research projects.

**f. Budget for the project and further elaboration on funding source and selection as needed to supplement (b) above.**

Funding for this construction phase is available and unencumbered in the correct accounts within contract W911QY-18-C-0101 P00006 and W911QY-20-C-0053.

**g. Alternatives that were considered to meet the need being addressed by this project.**

Many alternatives within and around the existing ASCC footprint were studied but found to be inadequate or cost prohibitive. Available space to accommodate the activities required to be accomplished in the Secure Laboratory are presently not available within the ASCC or cleanrooms at the UMaine campus.

**h. Timeline for start, occupancy and completion**

Design is currently in process with construction anticipated to start in the fall of 2022, with completion for occupancy in Summer of 2023.

**i. Timeline for any further consideration or action anticipated to be needed by the Board or its committees regarding this project if full authority is not being requested from the outset.**

The present action is expected to accomplish the requirements of the laboratory with the funding available.

**j. Additional information that may be useful to consideration of the item.**

None

**TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities and Technology Committee approves the following resolution to be forwarded to the Consent Agenda for Board of Trustee approval at the March 27-28, 2022 Board meeting:

That the Board of Trustees, accepts the recommendation of the Finance, Facilities and Technology Committee, and authorizes the University of Maine System acting through the  
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University of Maine to expend up to \$2,451,268 to construct approximately 4,000 square feet of space mostly within the existing ASCC facility to accommodate installation of a Secure Laboratory to be utilized for research on smart materials.

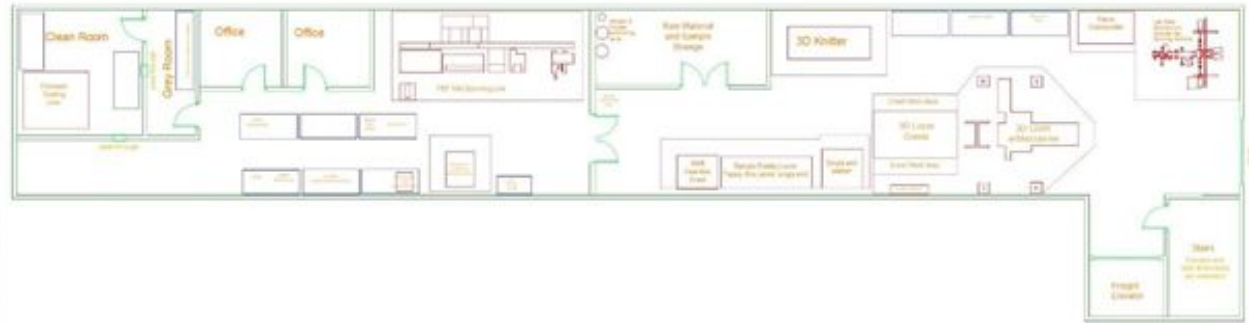
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Secure Laboratory, Advanced Structures  
and Composite Center (ASCC), UM  
TAB 7



7.1



### ASCC Secure High-Performance Textiles Lab

- This project is the second and final part of a two-phase construction project that included secure offices and secure lab space
- Capabilities and projects will further the development of green and bio-friendly materials for use in textiles, lightweight structures and 3D printing. SMART material systems will be developed, refined, and prototyped to the level of a commercial product.
- Fully funded and unencumbered on existing U.S. Army contracts, including facility construction and equipment costs
- 4000 sf of additional lab space above the Thermoplastic Lab, including 400 sf for accessibility



University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Approval of FY2021 Maine Economic Improvement Fund Annual Report

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:**

**BOARD ACTION:** X

**BOARD POLICY:**

**UNIFIED ACCREDITATION CONNECTION:**

**BACKGROUND:**

Maine statute requires the University of Maine System to provide an annual report of the Maine Economic Improvement Fund (MEIF) to the Governor and Legislature each year. In addition to listing the annual financial data, we also include an assessment of the achievement of the annual goals and objectives, and a summary of the research and development projects that have been funded. The annual report is included in the meeting materials for review and approval.

**TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities and Technology Committee approves the following resolution to be forwarded for Board of Trustee approval at the March 27-28, 2022 Board Meeting.

That the Board of Trustees accepts the recommendation of the Finance, Facilities and Technology Committee and approves the 2021 Maine Economic Improvement Fund Annual Report as presented.

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# Maine Economic Improvement Fund

FY 2021 Annual Report

March 10, 2022

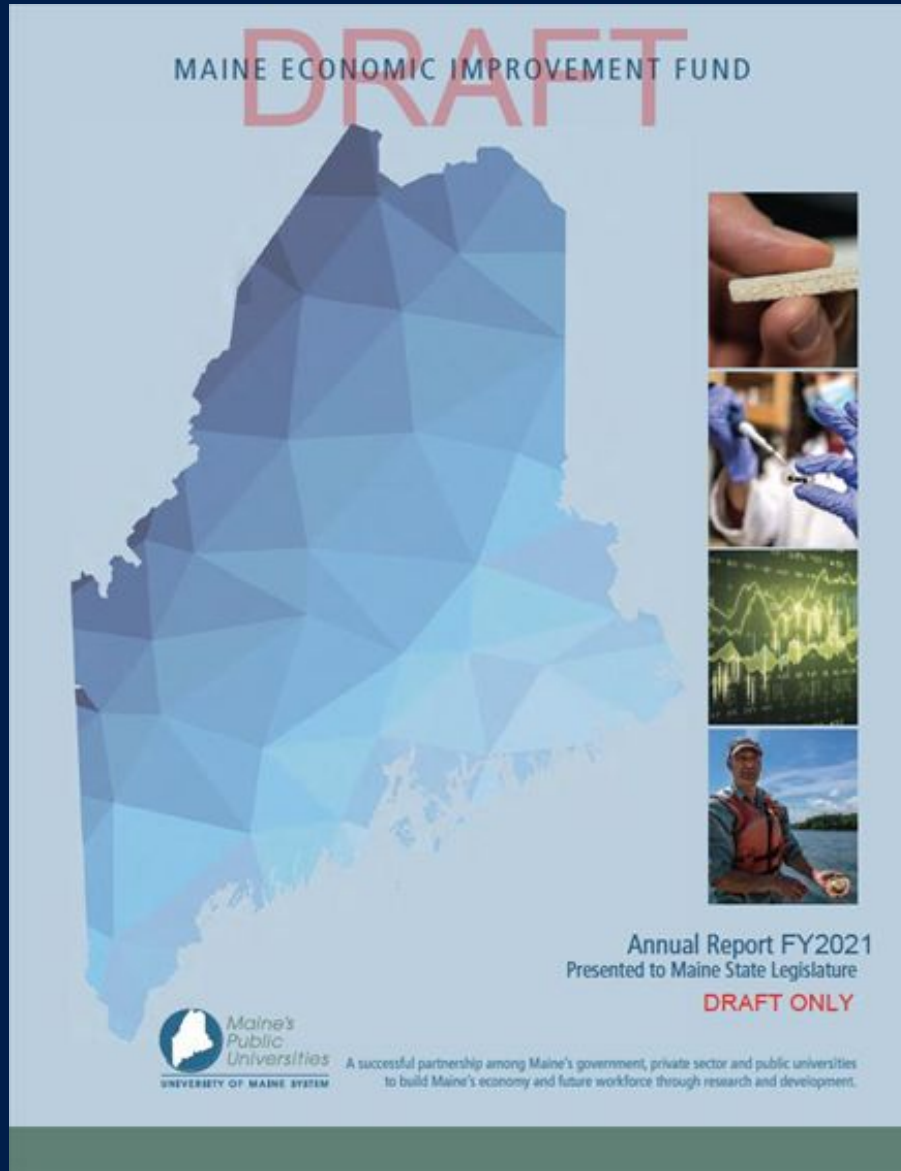
Joan Ferrini-Mundy

President and Vice Chancellor for  
Research and Innovation

Jake Ward

Vice President for Innovation and  
Economic Development

8.1





***The role of MEIF is to solve fundamental problems and discover new solutions.***

*MEIF provides researchers at Maine's public universities with the investment necessary to:*

- Attain external grants and contracts to support R&D activity in Maine's seven sectors
- Attract and retain world-class researchers
- Provide support for modern laboratories and state-of-the-art equipment
- Create new products, patents, technologies, companies and exciting job opportunities in Maine
- Create and sustain economic development and innovation

8.1



# The FY2021 MEIF investment made an impact.

**\$17.35M**  
Annual MEIF  
Investment



**\$98M+**  
in federal and  
private-sector grants  
and contracts  
in the 7 sectors

Leveraged at  
a rate of 5.7:1

## Funding the work of



**506**

Researchers



**1190**

Students

## Providing R&D support to



**390**

Companies  
& Individuals



Major equipment to  
upgrade and outfit labs





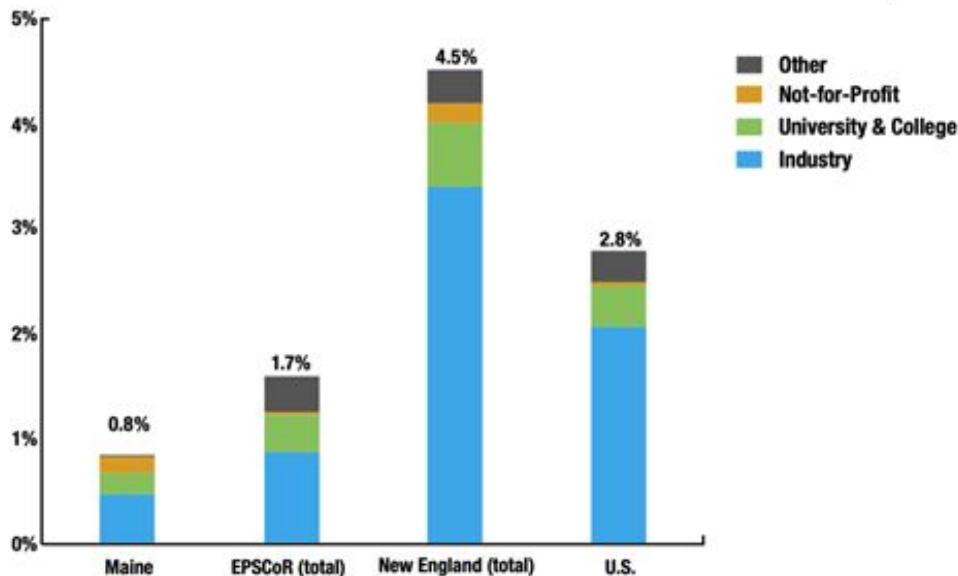
THE UNIVERSITY OF  
**MAINE**

# Maine trails badly in R&D investment.

**9 - Research and Development**

**0%** Maine trails badly in R&D investment

**TOTAL PERCENT OF GDP TOWARD R&D BY MAJOR PERFORMANCE SECTOR, 2018**



**Benchmark:**  
Maine's research and development spending as a proportion of the economy will reach the U.S average by 2030.

**Source:**  
Camoin Associates, National Science Foundation, U.S. Bureau of Economic Analysis, University of Maine

Research and development (R&D) spending is an indicator of the level of innovation in an economy, an important driver of economic growth. In 2018, Maine's total R&D spending was \$527 million, up slightly from \$520 million in 2017.

R&D spending in Maine represents 0.8% of total gross domestic product (GDP), compared to 2.8% nationwide. This ranks us 43rd of the 50 states and is about one-half of the estimated 1.7% average among EPSCoR states. Maine lags other states in private sector

and university R&D investments relative to GDP, while our non-profit sector contributes a relatively higher proportion of spending.

Maine's lack of an R1\* research university contributes to this situation. To address this, the University of Maine System Board of Trustees recently prioritized the expansion of R&D across the system. In 2020, the University of Maine's R&D expenditures reached \$165.1 million, a record high. These gains may improve Maine's overall R&D ranking in future years.

\*\*R1\* refers to doctoral universities with "very high research activity," as defined by the Carnegie Classification of Institutions of Higher Education.

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“Maine’s lack of an R1\* research university contributes to this situation.”





THE UNIVERSITY OF  
**MAINE**

*The University of Maine and UMS are the State's most promising resource for growing R&D as a percent of GDP.*



University of Maine Portland Gateway: one-stop connection to UMaine's research, education, and outreach

Blind Dog Photo, courtesy of Wright-Ryan Construction

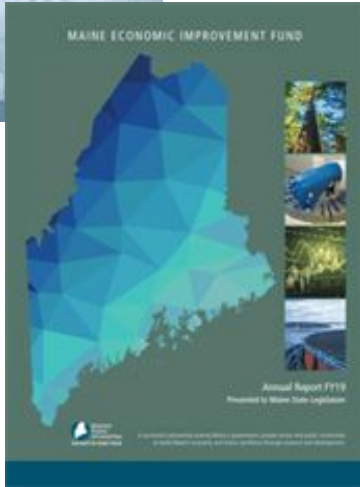


UMaine is Statewide

- Academic
- ◆ Research facilities
- ▲ Cooperative Extension



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UNIVERSITY OF MAINE SYSTEM  
**TRANSFORMS**  
*Maine's Public Universities*

**R1**  
DEFINES  
**TOMORROW**



8.1



***MEIF builds UMS's talent, innovation and infrastructure.***

## **MEIF FY2021 Objectives**

- Objective 1: Attract top talent and new financial resources to the state of Maine to increase the state's R&D capacity
- Objective 2: Address the current and future workforce needs of the state to benefit the people and businesses of Maine
- Objective 3: Elevate R&D activities within the UMS to benefit Maine's economy.

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## ***MEIF supports research that matters to Maine.***

- Increasing focus on rapid response to solve Maine challenges and drive immediate opportunities as part of pandemic recovery
- Using UMS's talent, innovation and infrastructure assets as the springboard for recovery and growth
- Fostering innovation in Maine's heritage industries and developing new markets and new products for key Maine economic sectors
- Building strategic partnerships with business, industry and government to support State economic priorities

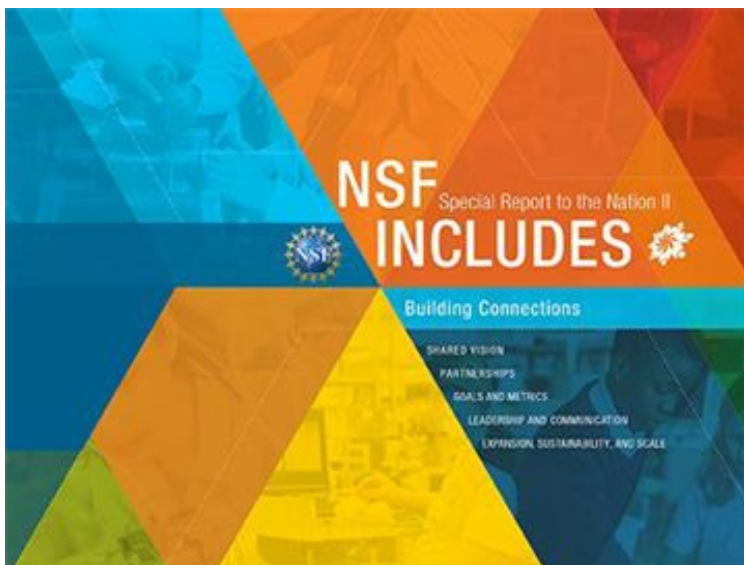


## *We have ideas about the future evolution of MEIF: A grand challenge approach.*

Around the world, research universities lead grand challenge initiatives in partnership with the private sector and government to focus their research, education, and outreach efforts to:

- Promote discovery
- Develop the workforce
- Engage the public in solving pressing societal problems

8.1





## *Sector Impact Examples*

### **Forestry**

Accelerate the goals for FOR/ME and forest sector: collaborations including Maine-based biomaterials for packaging

### **Public Health**

Expand capacity to respond to public health challenges (use of telemedicine, AI, etc.) in partnership with Maine Healthcare, State DHHS/CDC, non-profit biomedical

### **Aquaculture**

Accelerate the development of land-based recirculating aquaculture (RAS) with companies like Nordic, Whole Oceans, Kingfish Maine, American Unagi

### **Renewable Energy**

Accelerate offshore wind commercialization with NEAV, Cianbro and work with state, external partners to advance other Climate Action Plan goals

### **Education and Healthcare**

Pursuing \$20M in funding from EDA to create good jobs challenge partnership with MCCA, DHHS, MDOE, and UMS to fill teacher and nursing shortages



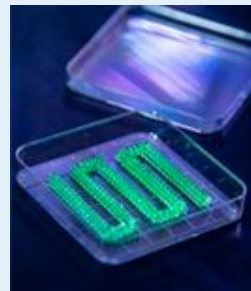
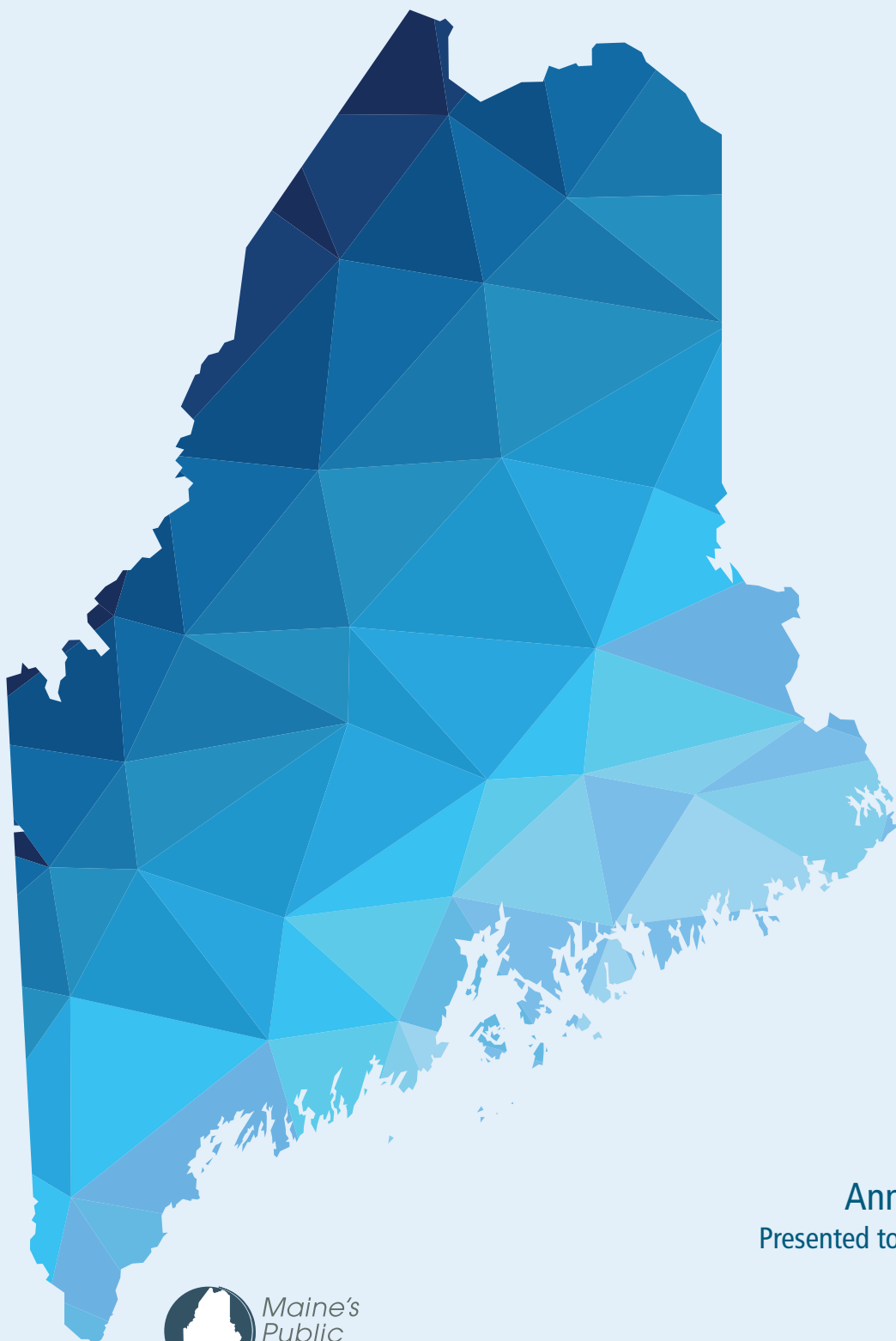
***We will be proposing a pilot in FY2023 of a DARPA\*-like approach for some MEIF funds.***

- Conduct market research, market development, field trials, etc.
- Fund university-business partnerships meant to solve specific problems in Maine.
- Support post-docs, graduate students and undergraduate fellows who can advance innovation and commercialization.
- Establish joint fellowship appointments with State of Maine agencies to help them implement research in the field.
- Use limited funding for facility upgrades and critical path equipment (leveraging external funds).

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\* DARPA - [Defense Advanced Research Projects Agency](#)

# MAINE ECONOMIC IMPROVEMENT FUND



8.2

Annual Report FY2021  
Presented to Maine State Legislature

**DRAFT ONLY**



A successful partnership among Maine's government, private sector and public universities to build Maine's economy and future workforce through research and development.

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MAINE ECONOMIC IMPROVEMENT FUND  
2021 ANNUAL REPORT

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Memo from the Chancellor

**Final copy pending approval.**

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## MEIF Background

The Maine Economic Improvement Fund (MEIF) represents the ongoing commitment between the state, the private sector and our public universities, working together to advance research and economic development for the benefit of all Maine people.

Since the Maine Legislature established MEIF in 1997, MEIF has positioned the University of Maine System (UMS) at the center of statewide efforts to leverage economic development through targeted investment in university-based R&D. MEIF continues to be funded through an annual state appropriation to UMS.

These funds provided through state appropriation to the University of Maine System are dollars specifically directed to support university-based research, development and commercialization in the state’s legislatively designated seven strategic technology areas:

- Advanced Technologies for Forestry and Agriculture
- Aquaculture and Marine Sciences
- Biotechnology
- Composites and Advanced Materials Technologies
- Environmental Technologies
- Information Technologies
- Precision Manufacturing

The University of Maine and the University of Southern Maine have

well-established research, development and commercialization activities accounting for 97 percent of the MEIF activity. In 2009, the University of Maine System established the Small Campus Initiative Fund to promote seven-sector research and development activity at the other five UMS campuses and, as of 2013, Maine Maritime Academy (MMA).

## Role of MEIF

The role of MEIF is to support the solution of fundamental problems and discover new solutions, and to provide researchers at Maine’s public universities with the investment necessary to:

- Attain external grants and contracts to support R&D activities in Maine’s seven sectors
- Attract and retain world-class researchers
- Provide support for modern laboratories and state-of-the-art equipment
- Create new products, patents, technologies, companies and exciting job opportunities in Maine
- Create and sustain economic development and innovation

MEIF funds often provide the required match to acquire federal or private sector grants, and this investment in Maine’s public university R&D helps faculty, staff and students successfully leverage tens of millions of dollars in grants and contracts annually.

MEIF directly supports faculty, grad students and staff who are working to make the universities more competitive for federal grants, expanding opportunities to support Maine companies and involve students in research learning and real applications of their education.

MEIF increasingly fosters university partnerships with business and industry through economic development collaborations, entrepreneur training programs, business incubators, technology accelerators, business research and other programs. These efforts lead to new Maine-based products, technologies, patents and spin-off businesses.

The University of Maine and the University of Southern Maine are the two universities with established research and graduate programs in the seven targeted research sectors and have received MEIF funds, with 76.6 percent to the University of Maine and 19 percent to the University of Southern Maine. In addition, 1.4 percent of MEIF funds are awarded to the University of Maine Machias and 3 percent to the other campuses and Maine Maritime Academy.

### Indicators of success show that Maine’s MEIF investment is paying dividends by:

- Creating businesses and jobs, including the jobs of more than 500 faculty and staff, and nearly 1200 students working on MEIF-funded projects.
- Boosting Maine’s economy by leveraging MEIF funds to bring federal and private-sector grants and contracts to Maine.
- Building capacity and expertise to help Maine companies solve problems and commercialize innovation.
- Generating new intellectual property and working to commercialize patents and innovations.
- Capitalizing on natural resources and core strengths by focusing R&D efforts on economic sectors where Maine can make real gains. University research personnel use MEIF resources to support the staff, equipment and facilities they need to successfully pursue and develop research projects.

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## Progress in FY2021: Strategic Outcomes, Goals and Metrics

In December 2018, the University of Maine System Board of Trustees issued a Declaration of Strategic Priorities, the first of which is Advancing Workforce Readiness and Economic Development, with a priority action item: Strengthen research and economic development efforts to support Maine industries, and to foster business formation and expansion. The five-year University of Maine System Research and Development Plan was approved in the Spring of 2019 with three specific goals that drive the UMS research activities including the Maine Economic Improvement Funds.

**Goal One** – Make Maine the best state in the nation in which to live, work, and learn by 2030

**Goal Two** – Establish an innovation-driven Maine economy for the 21st century

This report addresses these goals. In addition, the University of Maine System reports R&D outcomes annually through the statutorily required survey of Maine R&D activity administered by the Maine Department of Economic and Community Development Office of Innovation (5 MSRA 13107).

The R&D Strategic Outcomes and related MEIF goals are:

### MEIF Metric 1: Increase Research Capacity and Activity

UMS maintains a sponsored programs grant and contracts effort growing greater than 3 percent annually on a three-year rolling average from a 2013 baseline of \$45 million and NSF-defined total research expenditures of \$45 million in the MEIF sectors. Activity from the seven MEIF sectors will account for 50 percent of the total R&D grants and contracts, with a 3 percent annual growth on a three-year rolling average. The utilization of MEIF funds will leverage other resources including grants and contracts from the federal government and the private sector increasing the impact of the State's investment.

**Table 1**

FY2021 Total Grants and Contracts (ALL Activity Inclusive)	Number of Proposals UM/UMM	Total Value UM/UMM	Number of Proposals USM	Total Value USM	Number of Proposals ALL	Total Value ALL
Total Proposals Submitted	935	\$277,167,149	186	\$49,000,000	1,121	\$326,167,149
Total Proposals Awarded	763	\$107,537,744	146	\$23,000,000	909	\$130,537,744

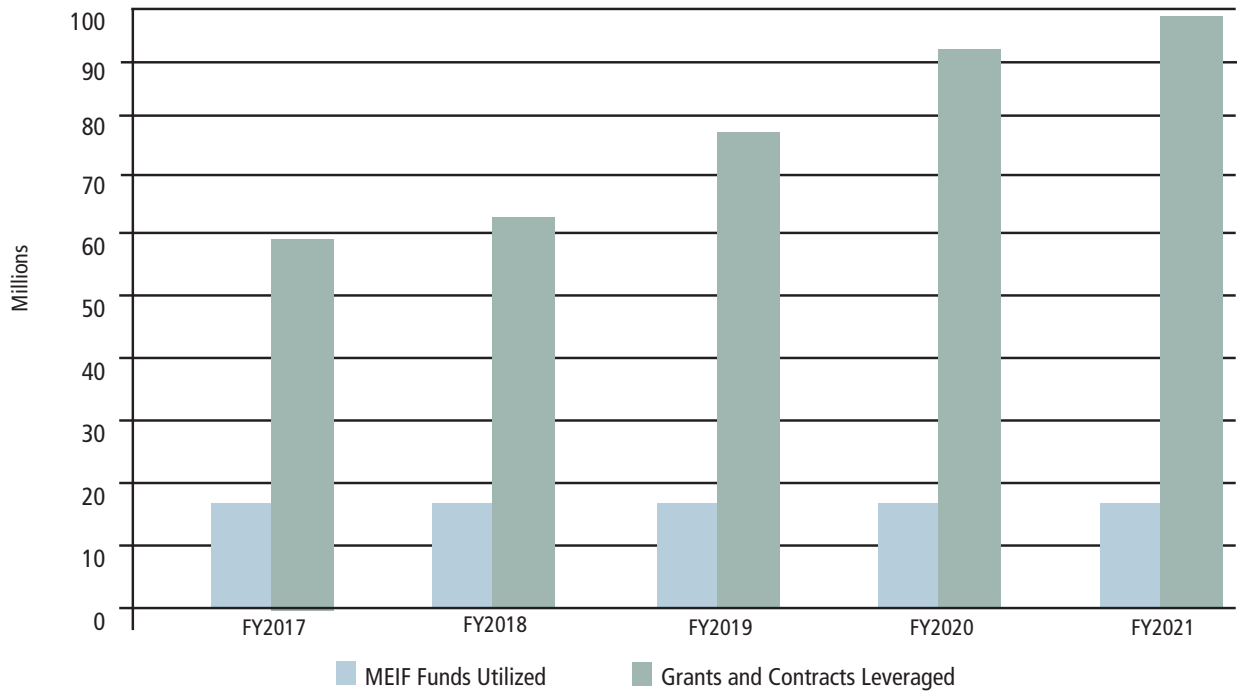
#### Grants and Contracts Awarded in MEIF Sectors Only

	FY2017	FY2018	FY2019	FY2019	FY2021 Detail		
	MEIF Awards	MEIF Awards	MEIF Awards	MEIF Awards	UM/UMM MEIF Awards	USM MEIF Awards	Total USM MEIF Awards
Aquaculture and Marine	21,229,069	16,032,068	8,084,961	8,698,761	10,764,452	8,801	10,773,253
Biotechnology	3,821,390	6,552,964	16,035,473	14,611,906	8,292,946	36,685	8,329,631
Composites	13,504,642	9,952,947	11,478,611	31,093,652	38,754,403	0	38,754,403
Cross Sector	4,274,394	3,034,812	21,301,337	2,783,430	4,565,468	1,093,651	5,659,119
Environmental Technologies	5,543,121	7,407,213	7,250,820	7,466,987	9,890,019	1,718,935	11,608,954
Forestry and Agriculture	4,660,014	10,685,631	9,598,475	17,624,566	15,592,117	19,633	15,611,749
Information Tech	5,292,726	5,582,266	951,594	7,069,113	6,553,246	133,126	6,686,372
Precision Manufacturing	1,602,646	3,099,123	1,870,527	3,077,779	1,158,472	0	1,158,472
<b>Total</b>	<b>\$59,334,874</b>	<b>\$62,347,023</b>	<b>\$76,571,798</b>	<b>\$92,426,194</b>	<b>\$95,571,122</b>	<b>\$3,010,831</b>	<b>\$98,581,953</b>
<b>FY2020–FY2021 Increase 7%</b>							

Strategic Outcomes, Goals and Metrics

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**Figure 1 FY2017-2021 MEIF Return on Investment 5.7:1 (UMS)**  
Tens of Millions Leveraged in Grants and Contracts (Five-Year Snapshot)



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In summary, the MEIF Target 1 for increasing external grants and contracts leveraged through MEIF investments saw an increase of 7 percent over the previous fiscal year exceeding the goal of 3 percent per year. Continued growth can be attributed to the efforts of UMS researchers and energized by the turnover in faculty researchers resulting in more than 150 new faculty in the last few years. New faculty researchers typically need several years of start-up activity to become competitive proposal writers, and their success is starting to show. Another key

contributor to this growth is larger multi-principle investigator proposals at well-established centers.

Recognizing the lead time for proposal preparation, sponsor review and selection, and contract activity to begin, there can be a one- to two-year lag in output. Proposal preparation and submissions remain steady. For the purpose of this report, a private-sector contract is counted as a single proposal submission.



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## MEIF Metric 2: Support New Technologies, Licensing, and Commercialization

UMS annual revenue from commercialization including intellectual property licensing from the MEIF sectors increases at least 10 percent annually on a three-year rolling average.

**Table 2**

MEIF Target 2 — Commercialization Activity	FY2017	FY2018	FY2019	FY2020	FY2021	Five-Year Average
Revenue from Commercialization	\$329,840	\$914,120	\$289,088	\$519,019	\$299,430	\$470,299
Rolling three year average	\$298,091	\$482,890	\$511,016	\$574,076	\$369,179	\$447,050
Number of Patents Filed (US/PCT)	18	20	17	16	23	19
Number of Patents Issued (US)	8	6	6	11	7	8
Number of License Agreements and License Options	7	9	11	8	4	7.8

FY2020–FY2021 Change in Three-Year Average Revenue -36%

In summary, three-year rolling average revenue from commercialization has shown an overall increase over the last decade, but fell over the last fiscal year. Commercialization relies on private companies utilizing UMS intellectual property to secure private investment to advance technology, products and services into markets. Maine continues to rank very low in comparison to other states for its industry R&D and innovation. This has been recognized by the state economic development agencies and is addressed in the 2020 Maine Economic Development Strategy. The lingering pandemic has greatly impacted the startup and new venture community, yet activity is starting to return.

The timeline for commercialization of newly invented technology is hard to predict, but it is lengthy. U.S. patent applications take four to five years from initial application to issuance. Newly issued UMS patents reported above and detailed in Appendix 1 were filed four to five years ago. In addition, many UMS technologies fall into capital-intensive categories, such as transportation infrastructure, pulp and paper, sensors and biotechnology.

These sectors have longer timelines from lab to market at five to 10 years. UMS is focusing additional effort to accelerate commercialization with private-sector partners and other investment programs, such as the Maine Technology Institute and Maine Venture Fund.

## MEIF Metric 3: Increase Economic Development Partnerships

The UMS annual revenue from activities with business and industrial partners in the MEIF sectors has stalled, due in large part to reduced activity during the pandemic. Revenue reached \$9,581,790 in FY2021, a decrease of approximately 12 percent, but was buoyed by a few large projects started before the pandemic. The number of business and industry contracts in the MEIF sectors is beginning to rebound from the pandemic-related drop-off seen in FY2020.

**Table 3**

MEIF TARGET 3 — Business and Industry Contracts	FY2017	FY2018	FY2019	FY2020	FY2021
Revenue from Business and Industrial Contracts	\$5,035,394	\$6,339,260	\$7,211,422	\$10,876,661	\$9,581,790
Number of Business and Industrial Contracts	565	528	530	327	390

FY2020–FY2021 Change in Revenue -11.91%

In summary, many MEIF investments not only leverage external grants and contracts, but – through a combination of MEIF funds, and grant and contract funds – help UMS campuses build capacity to work directly with industry partners. Figure 2 illustrates the breadth of contract work with companies throughout the state. Some industry partners are companies licensing and commercializing UMS

intellectual property, while many companies are working with UMS campuses for problem solving and product development. Figure 2 demonstrates the statewide nature of these partnerships for those contracts that are currently tracked. Many additional companies, inventors and entrepreneurs receive advice and guidance that does not result in formal contracts.

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Strategic Outcomes, Goals and Metrics

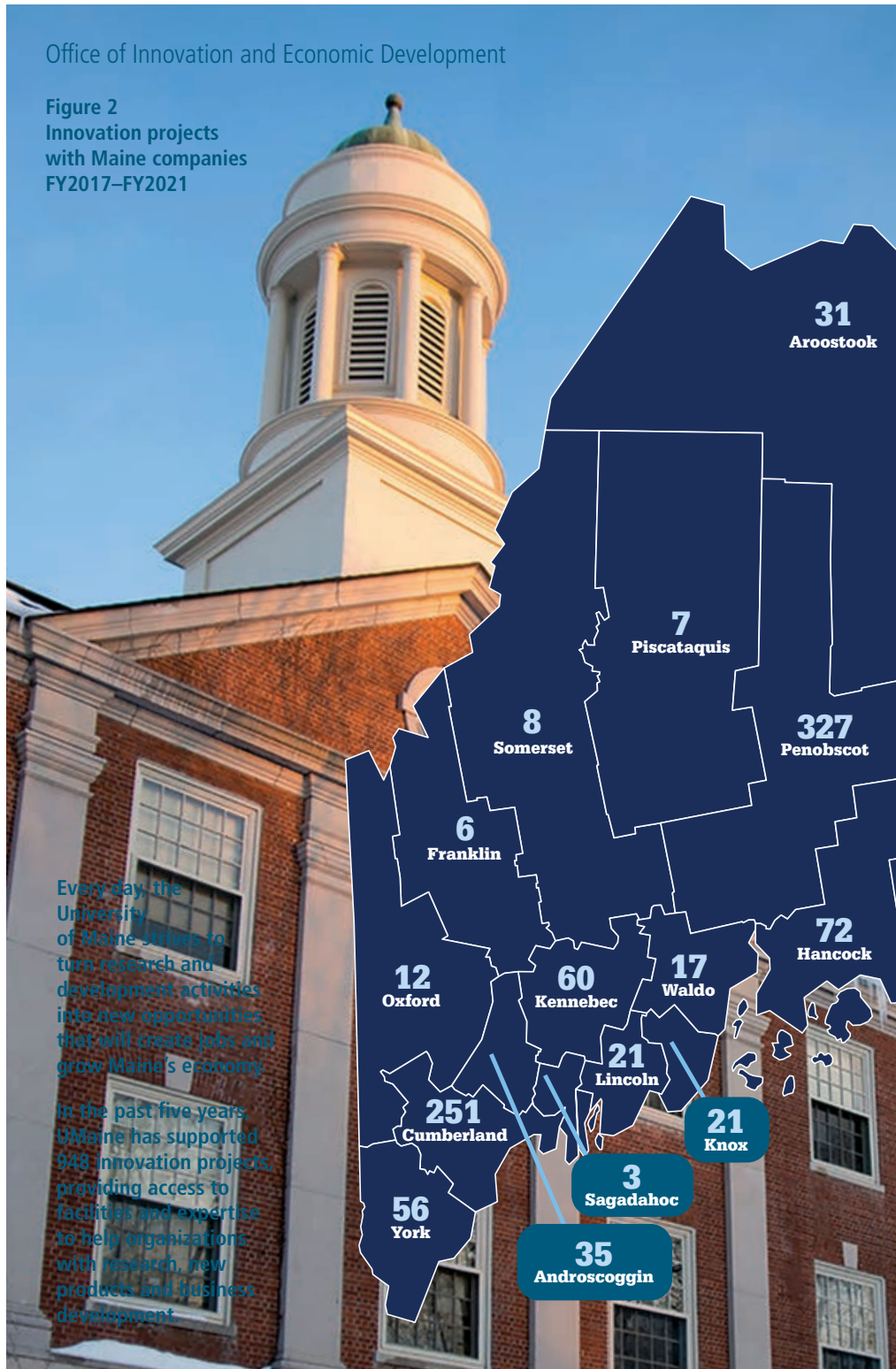
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**948**  
**Innovation**  
**projects**  
**with Maine**  
**companies**

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Office of Innovation and Economic Development

**Figure 2**  
**Innovation projects**  
**with Maine companies**  
**FY2017–FY2021**



Every day, the University of Maine strives to turn research and development activities into new opportunities that will create jobs and grow Maine's economy.

In the past five years, UMaine has supported 948 innovation projects, providing access to facilities and expertise to help organizations with research, new products and business development.

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## MEIF Metric 4: Support R&D Workforce Development

UMS shall maintain a concerted effort to involve faculty, staff and students participating in research, development and commercialization, and shall report annually the number of employees directly supported by MEIF funds and by grants and contracts in the MEIF sectors. As external funding is hard to predict, there is no specific numerical goal for employee count, but UMS shall report the annual number of faculty, staff and students to indicate trends and identify opportunities for growth.

In summary, state economic analysis predicts economic growth in Maine based on an available trained and educated workforce. Growth in the seven MEIF sectors is especially dependent on the available workforce. MEIF seven-sector projects at UMS rely on regular faculty and staff, as well as many “soft money” employees — those hired to work on specific grants and contracts, and paid by those grant and contract funds. UMS employees and students gain valuable on-the-job training and experience, and may then contribute to the employment base within these sectors after completion of the grants or graduation. Grant and contract revenue is a strong contribution to this workforce development. UMS counts employees involved in this activity, and will continue to pursue the growth in employment numbers related to growth in grant and contract activity. Non-student employees are tracked as full-time equivalents (FTEs) based on a 40-hour/52-week work year. Student employees, tracked by head count, generally work fewer than 20 hours per week during the academic year.

Grant and contract revenue also is an important source of funding for students’ salary, tuition and other types of support, allowing many research-active students to offset their cost of education while getting valuable skills and on-the-job experience, positioning them well to be leading contributors to Maine’s key growth sectors.

### Success and Strategic Impact

By investing MEIF funds in researchers, facilities and matching for grants, UMS has attracted more than \$389 million over the last five years (FY2017-2021) in federal and private-sector grants and contracts related to the seven strategic research areas. This funding directly results in Maine products and technologies, such as biofuels, pulp and paper products, biomaterials and bridges, new potato varieties, aquaculture technologies, offshore wind hulls, and software, which lead to improvements in Maine’s industries.

### Return on Investment

Each year, the power of the state’s MEIF appropriation is expanded by tens of millions of dollars in federal and private funds for important research, development and commercialization. The University of Maine, as the state’s land grant, sea grant, and space grant institution, utilizes its long-established research capacity and infrastructure to attract the majority of these external funds. Other UMS schools continue to build and partner within federal and private-sector grants and contracts.

### Developing Workforce and Creating Jobs

Five hundred plus full-time equivalent jobs are funded in Maine through the grants and contracts leveraged and expended related to MEIF. These positions include faculty, technicians and research staff. Currently, 1,190 graduate and undergraduate students are funded for their involvement in research, development and commercialization. This student involvement in research, development and commercialization projects is comparable to an internship and gives students great real-world experience as well as life-long networks and connections.

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Table 4-A FY2021

MEIF Target 4 — Workforce Development	Wages paid from MEIF	Wages paid from Grant/Contract	Totals
Number of faculty staff supported (FTE = Full Time Equivalent)	143.01	362.95	505.96
Number of Graduate students supported (headcount)	28	515	543
Number of Undergraduate students supported (headcount)	113	534	647

Table 4-B

Student costs from grants and contracts	FY2017	FY2018	FY2019	FY2020	FY2021
Student salaries and wages from grants and contracts	\$4,957,536	\$4,853,956	\$6,361,381	\$6,869,073	\$7,559,179
Student tuition paid by grants and contracts	870,787	795,339	916,618	1,384,425	\$1,306,089
Student fellowships/scholarships paid by grants and contracts	233,111	373,118	457,884	422,111	\$799,695
Student health insurance paid by grants and contracts	203,406	214,000	298,386	296,807	\$308,195
<b>Total soft money student support</b>	<b>\$6,658,528</b>	<b>\$6,264,840</b>	<b>\$6,236,413</b>	<b>\$8,034,269</b>	<b>\$9,973,158</b>

FY2020–FY2021 Change 19%

Strategic Outcomes, Goals and Metrics

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**MEIF Metric 5: MEIF Small Campus Initiative**

In 2009, the University of Maine System established the Small Campus Initiative Fund to promote seven-sector research and development activity at the other five UMS campuses and, as of 2013, Maine Maritime Academy (MMA).

**Table 5-A**

MEIF Small Campus Initiative Awards by Fiscal Year	FY2017	FY2018	FY2019	FY2020	FY2021
UM – Augusta	\$0	\$0	\$85,129	\$0	\$25,000
UM – Farmington	\$77,000	\$0	\$0	\$300,000	\$0
UM – Fort Kent	\$0	\$182,500	\$0	\$130,000	\$24,899
UM – Machias	\$200,000	\$300,000	\$300,000	\$0	\$250,000
UM – Presque Isle	\$0	\$182,500	\$0	\$0	\$168,474
Maine Maritime Academy	\$97,257	\$0	\$49,934	\$130,000	\$0
<b>Total Annual Awards</b>	<b>\$374,257</b>	<b>\$665,000</b>	<b>\$435,063</b>	<b>\$560,000</b>	<b>\$468,373</b>

**Table 5-B FY2021**

Awards by Campus	PI(s)	Campus	Amount
MLT Program: Modernization & Meeting Demand	Elisha Sirois	UMA	\$25,000
Monitoring the Impacts of Climate Change on Forest Dynamics in Northern Maine	Kennedy Rubert-Nason	UMFK	\$24,899
Applied R&D to Foster Economic Growth in Maine’s Shellfish Aquaculture Industry	Brian Beal	UMM	\$250,000
Distributed Machine Learning Approaches for Big Data Analysis	Rafiul Hassan	UMPI	\$168,474
			<b>\$468,373</b>

- The Medical Laboratory Technologist (MLT) Program of Maine, a highly successful collaboration that trains skilled biotech professionals to meet a clinical laboratory workforce shortage
- Data collection and analysis to measure the impacts of climate change on four ecologically and economically important tree species: sugar maple, red spruce, balsam fir, and northern white cedar
- R&D in Maine’s shellfish aquaculture industry (including the biological ramifications of ocean change on three commercially important bivalves and one crustacean) to inform decision-making for state and local officials, fisheries managers, harvesters, and aquaculturists
- The development of new machine learning approaches that can analyze large complex data sets using massive parallel and distributed computing power and help examine big data from biomedical, environmental and agricultural studies relevant to Maine.

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## MEIF Success Stories

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## Appendix 1 — University of Maine System Intellectual Property

Table A1-1

### University of Maine System — New Patent Applications Filed FY2021

Title	Application Type	Filing Date	Inventor	Campus
MOTION ABSORBING SYSTEM AND METHOD FOR A STRUCTURE	United States	5/7/21	Andrew Goupee, Habib Dagher, Anthony Viselli, Christopher Allen	Orono
CONTROLLED POROSITY STRUCTURAL MATERIAL WITH NANOCELLULOSE FIBERS	United States	11/10/20	Michael Mason, David Holomakoff, Muhammad Hossen	Orono
PROCESS FOR IMPROVING THE ENERGY DENSITY OF FEEDSTOCKS USING FORMATE SALTS	Norway	7/27/20	Paige Case, Adriaan van Heiningen, Clayton Wheeler	Orono
IMPROVED FILAMENTS FOR 3D PRINTING	Hong Kong	3/9/21	Douglas Gardner, Jordan Sanders, Lu Wang	Orono
NON-ORTHOGONAL ADDITIVE MANUFACTURING AND THE TREATMENT OF PARTS MANUFACTURED THEREOF	European Patent Convention	2/25/21	Matthew Ireland, James Anderson	Orono
COMPOUNDS AND METHODS FOR IMPROVING PLANT PERFORMANCE	Argentina	6/22/21	Pat Unkefer, Thomas Knight	USM
IMPROVED FILAMENTS FOR 3D PRINTING	China	7/8/20	Jordan Sanders, Lu Wang, Douglas Gardner	Orono
DOPPLER RADAR BASED BEE HIVE ACTIVITY MONITORING SYSTEM	United States	12/9/20	Herbert Aumann, Nuri Emanetoglu	Orono
TUNED MASS DAMPER FOR FLOATING STRUCTURES	United States	4/30/21	Andrew Goupee, Habib Dagher, Anthony Viselli, Christopher Allen	
NON-ORTHOGONAL ADDITIVE MANUFACTURING AND THE TREATMENT OF PARTS MANUFACTURED THEREOF	United States	1/22/21	Matthew Ireland, James Anderson	Orono
METHODS AND DEVICES FOR TREATMENT OF NEUROPATHY	PCT	5/7/21	Rosemary Smith, Kristy Townsend	Orono
LIGNOCELLULOSIC FOAM COMPOSITIONS AND METHODS OF MAKING THEREOF	PCT	10/28/20	Islam Hafez, Seyed Tayeb, Aileen Co, Michael Mason, Mehdi Tajvidi	Orono
PATHOGEN COLLECTION AND HANDLING SYSTEM "	PCT	6/30/21	Caitlin Howell, Daniel Regan	Orono
AF4124-7 HAMLIN RUSSET	United States	1/25/21	Gregory Porter	Orono
SYSTEMS AND METHODS FOR DETERMINING WATER CONTENT IN A SAMPLE	United States	9/14/20	Sfoog Saleh, Carl Tripp	Orono
METHODS AND SYSTEMS FOR AUGMENTING AND/OR SIMULATING FLAVORS	United States	7/24/20	Jonathan Roman Bland; Michael Gecawicz; R A Nimesha Ranasinghe, Meetha-Nesam James-Ravindran-Santhakumar	
CEMENT COMPOSITIONS, AND METHODS THEREOF	United States	3/12/21	Warda Ashraf, Hemant Pendse	Orono
ACTIVE COLOR-CHANGING LIQUID CRYSTAL FILAMENT AND YARN	United States	3/16/21	David Erb Jr, Christopher Erb	Orono
ADJUVANT FOR AQUACULTURE VACCINES USING ENGINEERED BACTERIA TARGETING THE STING PATHWAY	United States	11/24/20	Ian Bricknell, Jiahe Li, Deborah Bouchard	Orono
COMPOSITIONS AND METHODS FOR TOXIC SPECIES REMOVAL FROM FLUID	United States	6/15/21	Islam Hafez, Md Rahman	Orono
AUTONOMOUS ROAMING OFFSHORE WIND TURBINES	United States	4/9/21	Andrew Goupee, Habib Dagher, Anthony Viselli, Richard Kimball	Orono
DIGITAL MANUFACTURING FACILITY AND METHOD OF MANUFACTURING	United States	6/2/21	Habib Dagher	Orono
ELECTRICALLY CONTROLLABLE SURGICAL TOOLS	United States	12/4/20	Robert Ecker, Mohsen Shahinpoor	Orono
<b>Total 23</b>				

8.2



# DRAFT

Table A1-2

## University of Maine System — Patents Issued FY2021

Tech ID	Title	Country	Type	Patent Number	Issue Date
2000-05EP	COMPOUNDS AND METHODS FOR IMPROVING PLANT PERFORMANCE	Europe	European	3033316	8/5/20
2011-10US	RELEASE PAPER AND METHOD OF MANUFACTURE	United States	Utility	10731298	8/4/20
2012-17-05	IMPROVED METHODS OF CANCER DETECTION	United States	Divisional	10769790	9/8/20
2013-12US	SOFT TISSUE IN-GROWTH OF POROUS, THREE-DIMENSIONALLY PRINTED, TRANSCUTANEOUS IMPLANTS OF VARYING MATERIAL AND PORE GEOMETRY	United States	Nationalized PCT	10792129	10/6/20
2014-14US	METHODS FOR THE PRODUCTION OF HIGH SOLIDS NANOCELLULOSE	United States	Utility	10794002	10/6/20
2015-11US	COMPOSITE PRODUCTS OF PAPER AND CELLULOSE NANOFIBRILS AND PROCESS OF MAKING	United States	Utility	10875284	12/29/20
2015-16US	CONTROLLED POROSITY STRUCTURAL MATERIAL WITH NANOCELLULOSE FIBERS	United States	Nationalized PCT	10,870,950	12/22/20
2016-01US	ELECTRICALLY CONTROLLABLE SURGICAL TOOLS	United States	Utility	10881418	1/5/21
<b>Total Issued</b>					<b>39</b>
United States					7
International					32

The above table lists  
US Patents Only

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## Appendix 2 — Maine Economic Improvement Fund Financial History and Tables

Table A2-1

### A History of Legislative Actions on Appropriating State Research Funds

The following is a summary of the actions of the 118th–129th (first regular session) Maine Legislature with regard to appropriating research and development funds to the University of Maine System.

#### 118th LEGISLATURE

**March 26, 1997:** Governor signed into law the Economic Improvement Strategy (Chapter 24) that appropriated \$500,000 to UMS for research.

**April 1, 1998:** Governor signed into law the Economic Improvement Strategy (Chapter 643, Part LL, Sec. 5-3) that appropriated \$4 million to UMS for research. These funds were allocated from the FY1998 year-end state surplus for use in FY1999.

#### 119th LEGISLATURE

**March 15, 1999:** Governor signed into law the Part I Current Services budget (Chapter 16) that appropriated \$4 million in 1999–2000 and 2000–01 to UMS on a “base budget” basis for research. This extends the one-time FY1999 \$4 million research appropriation that was funded from the FY1998 year-end state surplus.

**June 4, 1999:** Governor signed into law the Part II Supplemental Appropriation budget (Chapter 401) that appropriated an additional \$5.55 million in 1999–2000 and an additional \$50,000 in 2000–01 to UMS on a “base budget” basis for research.

**April 25, 2000:** Governor signed into law the Part II Supplemental Appropriation budget (Chapter 731) that appropriated \$300,000 in 2000–01 to UMS on a “base budget” basis for the Maine Patent Program.

#### 120th LEGISLATURE

**June 21, 2001:** Governor signed into law the Part II Supplemental Appropriation budget (Chapter 439) that appropriated an additional \$2 million in 2002–03 to UMS on a “base budget” basis for research.

**March 25, 2002:** Governor signed into law a deappropriation (Chapter 559) that reduced the FY2003 \$2 million Supplemental Appropriation by \$1 million.

**July 1, 2002:** Governor signed a Financial Order that curtailed the FY2003 \$2 million Supplemental Appropriation by an additional \$1 million. This eliminated the FY2003 increase of \$2 million for research, bringing the FY2003 research and development appropriation back to the FY2002 level of \$10.1 million.

**November 18, 2002:** Governor signed into law a Supplemental Appropriation budget (Chapter 714) that deappropriated the \$1 million curtailment that was signed July 1, 2002.

#### 121st LEGISLATURE

**March 27, 2003:** Governor signed into law the Part I Current Services budget (Chapter 20, Part RR) that appropriated \$100,000 in 2003–04 and 2004–05 on a “base budget” basis for research.

**January 30, 2004:** Governor signed into law a Supplemental Appropriation budget (Chapter 513, Part P, Sec. P-2) that includes a provision to transfer to MEIF up to \$2 million of any unbudgeted State revenue remaining at the close of FY2004. The full amount was subsequently transferred to UMS. This same Chapter 513, Part P, Sec. P-3 made the \$2 million part of the MEIF FY2005 base appropriation.

#### 122nd LEGISLATURE

**March 29, 2006:** Governor signed into law a Supplemental Appropriations budget (Chapter 519, Part A, Sec. A-1) that includes providing one-time funding of \$600,000 in FY2007 for the commercialization of research and development activity, and for the Gulf of Maine Ocean Observing System.

#### 123rd LEGISLATURE

**June 7, 2007:** Governor signed into law a budget (Chapter 240, Part A, Sec. A-68) that provides an increase of \$1.5 million in FY2008 and an additional \$1 million in FY2009 on a “base budget” basis for research.

#### 124th LEGISLATURE

**May 28, 2009:** Governor signed into law a budget (Chapter 213, Part A, Sec. A-67) that maintains the annual funding at the FY2009 level of \$14.7 million.

#### 125th LEGISLATURE

**June 15, 2011:** Governor signed into law a budget (Chapter 380) that maintains the annual funding at \$14.7 million. **May 29, 2012:** PUBLIC Law (Chapter 698) creates the formula funding for the Small Campus Initiative, reserving a percentage of MEIF exclusively for the five smaller campuses of the University of Maine System.

#### 126th LEGISLATURE

**June 10, 2013:** Governor signed into law (Chapter 225) an amendment to the MEIF statute to include Maine Maritime Academy as a MEIF-eligible small campus.

**June 26, 2013:** Legislature approved into law a budget (Chapter 368) that maintains the annual funding at \$14.7 million.

#### 127th LEGISLATURE

**June 30, 2015:** Legislature approved into law a budget (Chapter 267) that increases the annual funding by \$2.65 million in each year of the biennium.

#### 128th LEGISLATURE

**July 4, 2017:** Governor signs into law the state budget that maintains the annual funding at \$17.35 million (FY2017/FY2018).

#### 129th LEGISLATURE

**June 17, 2019:** Governor signs into law the state budget that maintains the annual funding at \$17.35 million (FY2018/FY2019)

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Table A2-2

## Legislative History of MEIF New Appropriations

<b>118th LEGISLATURE</b>	<b>FY98</b>	<b>FY99</b>	<b>Total 2-Year</b>
UM	\$400,000	\$400,000	\$3,200,000
USM	100,000	100,000	800,000
<b>Total</b>	<b>\$500,000</b>	<b>\$500,000</b>	<b>\$4,000,000</b>
<b>119th LEGISLATURE</b>	<b>FY00</b>	<b>FY01</b>	<b>Total 2-Year</b>
UM	\$4,440,000	\$40,000	\$4,480,000
USM	1,110,000	10,000	1,120,000
<b>Total</b>	<b>\$5,550,000</b>	<b>\$50,000</b>	<b>\$5,600,000</b>
<b>120th LEGISLATURE</b>	<b>FY02</b>	<b>FY03</b>	<b>Total 2-Year</b>
UM	\$0	\$0	\$0
USM	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>121st LEGISLATURE</b>	<b>FY04</b>	<b>FY05</b>	<b>Total 2-Year</b>
UM	\$80,000	\$1,600,000	\$1,680,000
USM	20,000	400,000	420,000
<b>Total</b>	<b>\$100,000</b>	<b>\$2,000,000</b>	<b>\$2,100,000</b>
<b>122nd LEGISLATURE</b>	<b>FY06</b>	<b>FY07</b>	<b>Total 2-Year</b>
UM	\$0	\$540,000	\$540,000
USM	0	60,000	60,000
<b>Total</b>	<b>\$0</b>	<b>\$600,000</b>	<b>\$600,000</b>
*One-time funding			
<b>123rd LEGISLATURE</b>	<b>FY08</b>	<b>FY09</b>	<b>Total 2-Year</b>
UM	\$1,200,000	\$720,000	\$1,920,000
USM	300,000	180,000	480,000
INITIATIVES	0	100,000	100,000
<b>Total</b>	<b>\$1,500,000</b>	<b>\$1,000,000</b>	<b>\$2,500,000</b>
<b>124th LEGISLATURE</b>	<b>FY10</b>	<b>FY11</b>	<b>Total 2-Year</b>
UM	\$0	\$0	\$0
USM	0	0	0
INITIATIVES	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>125th LEGISLATURE</b>	<b>FY12</b>	<b>FY13</b>	<b>Total 2-Year</b>
UM	\$0	\$0	\$0
USM	0	0	0
INITIATIVES	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

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126th LEGISLATURE	FY14	FY15	Total 2-Year
UM	\$0	\$0	\$0
USM	0	0	0
INITIATIVES	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

127th LEGISLATURE	FY16	FY17	Total 2-Year
UM	\$2,056,400	\$0	\$2,056,400
USM	514,100	0	514,100
INITIATIVES	79,500	0	79,500
<b>Total</b>	<b>\$2,650,000</b>	<b>\$0</b>	<b>\$2,650,000</b>

128th LEGISLATURE	FY18	FY19	Total 2-Year
UM	\$0	\$0	\$0
USM	0	0	0
INITIATIVES	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

129th LEGISLATURE	FY20	FY21	Total 2-Year
UM	\$0	\$0	\$0
USM	0	0	0
INITIATIVES	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

130th LEGISLATURE	FY22	FY23	Total 2-Year
UM	\$0	\$0	\$0
USM	0	0	0
INITIATIVES	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

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**Total Yearly Research Appropriations for FY2021**

UM	\$13,263,600
USM	3,315,900
UMM	250,000
UMFK	0
UMA	0
UMPI	0
UMS	520,500
MMA	0
<b>Total</b>	<b>\$17,350,000</b>

Small Campus Initiatives	S.C. Initiatives
University of Maine at Augusta	UMA
University of Maine at Farmington	UMF
University of Maine at Fort Kent	UMFK
University of Maine at Machias	UMM
University of Maine at Presque Isle	UMPI
Maine Maritime Academy	MMA

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Table A2-3 Maine Economic Improvement Fund  
Utilization of FY2021 Operating Research Appropriation by Targeted Research Areas

Targeted Research Area	Source of R&D Funds				Utilization of R&D Funds			Balance			
	FY2021 R&D Initial Base Budget	Unused R&D Funds from Prior Years As Reported	Adjustment to Prior Years Unused R&D Funds	Adjusted Unused R&D Funds from Prior Years	FY2021 R&D Funding Transfers	FY2021 Total R&D Funds Available	FY2021 R&D Actual Expenditures		Transferred To Match Grants & Contracts	Transferred Between R&D Accounts	Total R&D Funds Utilized
<b>UMAINE</b>											
Adv. Technology Forestry & Agriculture	\$1,764,951	\$(893,741)	\$-	\$(893,741)	\$-	\$871,210	\$2,455,400	\$257,667	\$(1,042,862)	\$1,670,205	\$(798,995)
Aquaculture & Marine Science	2,354,090	(1,072,229)	-	(1,072,229)	-	1,281,861	2,874,130	703,128	(1,402,493)	2,174,765	(892,904)
Biotechnology	1,285,268	(1,061,522)	-	(1,061,522)	-	223,746	1,517,752	127,060	(606,750)	1,038,062	(814,316)
Composites	1,628,070	144,607	-	144,607	-	1,772,677	2,275,448	440,725	(1,010,055)	1,706,118	66,559
Environmental	1,576,902	(383,676)	-	(383,676)	-	1,193,226	2,047,986	215,783	(894,828)	1,368,941	(175,715)
Information Technology	1,767,007	(719,912)	-	(719,912)	-	1,047,095	2,426,288	88,498	(887,391)	1,627,395	(580,300)
Precision Manufacturing	1,568,649	209,072	-	209,072	-	1,777,721	2,051,361	56,955	(776,848)	1,331,468	446,253
Cross Sector	1,318,663	(245,300)	-	(245,300)	-	1,073,363	1,237,413	192,284	(282,197)	1,147,500	(74,137)
<b>Total State Funding</b>	<b>\$13,263,600</b>	<b>\$(4,022,701)</b>	<b>\$-</b>	<b>\$(4,022,701)</b>	<b>\$-</b>	<b>\$9,240,899</b>	<b>\$16,885,778</b>	<b>\$2,082,100</b>	<b>\$(6,903,424)</b>	<b>\$12,064,454</b>	<b>\$(2,823,555)</b>
UM Cost Sharing Funding <sup>2</sup>	6,903,424	-	-	-	-	6,903,424	-	-	6,903,424	6,903,424	-
<b>Total Funding</b>	<b>\$20,167,024</b>	<b>\$(4,022,701)</b>	<b>\$-</b>	<b>\$(4,022,701)</b>	<b>\$-</b>	<b>\$16,144,323</b>	<b>\$16,885,778</b>	<b>\$2,082,100</b>	<b>\$-</b>	<b>\$18,967,878</b>	<b>\$(2,823,555)</b>
<sup>1</sup> Includes year-end equipment carry-over funds (equipment ordered, not received, and not paid).											
<sup>2</sup> Salary and benefits from University.											
<b>USM</b>											
Targeted Research Area	FY2021 R&D Initial Base Budget	Unused R&D Funds from Prior Years As Reported	Adjustment to Prior Years Unused R&D Funds	Adjusted Unused R&D Funds from Prior Years	FY2021 R&D Funding Transfers <sup>3</sup>	FY2021 Total R&D Funds Available	FY2021 R&D Actual Expenditures	Transferred To Match Grants & Contracts	Transferred Between R&D Accounts	Total R&D Funds Utilized	Unused Funds Carried Forward To FY2022 <sup>1</sup>
Forestry & Agriculture	\$629,054	\$152,543	\$-	\$152,543	\$-	\$781,597	\$497,681	\$133,305	\$-	\$630,986	\$150,611
Aquaculture & Marine	366,234	376,955	-	376,955	-	743,189	397,109	-	-	397,109	346,080
Biotechnology	207,920	44,411	-	44,411	16,642	268,973	229,439	-	-	229,439	39,534
Composites	-	-	-	-	-	-	21,059	-	-	21,059	(21,059)
Environmental	25,593	5,971	-	5,971	24,139	55,703	31,862	-	-	31,862	23,841
Information Technology	623,855	217,198	-	217,198	-	841,053	525,570	32,967	-	558,537	282,516
Precision Manufacturing	20,000	3,546	-	3,546	29,643	53,189	33,263	20,000	-	53,263	(74)
Cross Sector	1,443,244	206,604	-	206,604	-	1,649,848	1,213,766	4,395	-	1,218,161	431,687
Unassigned	-	337,864	-	337,864	(70,424)	267,440	-	-	-	-	267,440
<b>Total State Funding</b>	<b>\$3,315,900</b>	<b>\$1,345,092</b>	<b>\$-</b>	<b>\$1,345,092</b>	<b>\$-</b>	<b>\$4,660,992</b>	<b>\$2,949,749</b>	<b>\$190,667</b>	<b>\$-</b>	<b>\$3,140,416</b>	<b>\$1,520,576</b>
<sup>1</sup> Includes year-end equipment carry-over funds (equipment ordered, not received, and not paid).											
<sup>2</sup> At USM, projects are funded on a year to year basis with renewals contingent on performance. A majority of the unused funds carried forward into FY22 are committed to multi-year projects.											
<sup>3</sup> Transfers for current year funding of USM R&D programs and awards from "Unassigned". UM base budgets the MEIF appropriation by sector and thus does not use funding transfers.											

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Table A2-4 Maine Economic Improvement Fund  
**FY2021 Summary Utilization of Operating Research Appropriation by University**

Targeted Research Area	Source of R&D Funds					Utilization of R&D Funds				Balance	
	FY2021 R&D Initial Base Budget	Unused R&D Funds from Prior Years As Reported	Adjustment to Prior Years Unused R&D Funds	FY2021 R&D Funding Transfers <sup>3</sup>	FY2021 Total R&D Funds Available	FY2021 R&D Actual Expenditures	Transferred To Match Grants & Contracts	Transferred Between R&D Accounts <sup>2</sup>	Total R&D Funds Utilized	Unused Funds Carried Forward to FY2022 <sup>1</sup>	
UMMAINE	\$13,263,600	\$(4,022,701)	\$(4,022,701)	\$-	\$9,240,899	\$16,885,778	\$2,082,100	\$(6,903,424)	\$12,064,454	\$(2,823,555)	
USM	3,315,900	1,345,092	1,345,092	-	4,660,992	2,949,749	190,667	-	3,140,416	1,520,576	
UMM	250,000	98,896	98,896	250,000	598,896	313,375	-	-	313,375	285,521	
UMFK	-	167,413	167,413	25,000	192,413	155,046	-	-	155,046	37,367	
UMPI	-	9	9	168,474	168,483	-	-	-	-	168,483	
UMA	-	1	1	25,000	25,001	-	-	-	-	25,001	
UMF	-	308,186	308,186	-	308,186	156,184	-	-	156,184	152,002	
UMS	520,500	(7,728)	(7,728)	(468,474)	44,298	-	-	-	-	44,298	
MMA	-	216,793	216,793	-	216,793	79,310	-	-	79,310	137,483	
<b>Total State Funding</b>	<b>\$17,350,000</b>	<b>\$(1,894,039)</b>	<b>\$(1,894,039)</b>	<b>\$-</b>	<b>\$15,455,961</b>	<b>\$20,539,442</b>	<b>\$2,272,767</b>	<b>\$(6,903,424)</b>	<b>\$15,908,785</b>	<b>\$(452,824)</b>	

<sup>1</sup>Includes year-end equipment carry-over funds (equipment ordered, not received, and not paid).

<sup>2</sup>UM Cost Sharing.

<sup>3</sup>Inter-unit R&D funding transfers related to FY2021 MMA and Small Campus Initiative (SCI) awards.



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University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** 300 Fore St. Renovation and Fit Out Increase, University of Maine And  
University of Maine School of Law

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:**

**BOARD ACTION: X**

**BOARD POLICY:**

701 – Budgets, Operating & Capital

**UNIFIED ACCREDITATION CONNECTION:**

The collaborative and inter-disciplinary work being done throughout the System will be enhanced by the ability of faculty and leaders to come together for innovation and collaboration. The new facility will bring together the Graduate School of Business, the Graduate and Professional Center, and the Law School in professional and modern spaces. The University of Maine will have space for the Portland Gateway, MCECIS, and UMaine Foundation staff.

**BACKGROUND:**

**a. Summary of the request**

The University of Maine System, acting through the University of Maine and the University of Maine School of Law, request to increase the authorization for the Portland, 300 Fore St. renovation and fit out project by \$1,327,396 for a total expenditure of up to \$12,827,396.

**b. Overall requested budget and funding source**

The current request is for a near-final authorization for the 300 Fore Street renovation project, which is estimated, with System contingencies, to total approximately \$13,500,000. The Board has previously authorized the expending of \$11,500,000 with the understanding that additional funding and authorization would be forthcoming. If authorized, the amount approved will bring total authorization to \$12,827,396. The funding sources for this authorization include a second gift from Bobby Monks and Bonnie Porta of over \$1,000,000, along with other funding sources identified by the Treasurer and Chancellor. This request is pursuant to Board Policy 701, which requires projects with a total cost of more than \$500,000 and any increases to those projects, be considered by the Board of Trustees or its Finance, Facilities & Technology (FFT) Committee. The request is that the FFT Committee forward the authorization to the Consent Agenda at the March 27-28, 2022 Board meeting.

**c. More detailed explanation of rationale for project and metrics for success of the project (ROI or other)**

The anticipation of a long-term presence in the building, whether through lease agreements or an ultimate purchase of the property create an opportunity for a vibrant, collaborative, and cross-disciplinary center in the midst of a thriving City, with technological updates that will allow inclusion of University System students throughout Maine, the United States, and even internationally. The current request nearly completes

02/28/2022

the funding necessary for the entire renovation and the anticipation of opening the building to students, faculty, staff, and visitors in the fall of 2022.

**d. Explanation of the scope and substance of the project as needed to supplement (a) and (c) above.**

No changes from prior Board authorizations

**e. Changes, if any, in net square footage or ongoing operating costs resulting from the project.**

No changes from prior Board authorizations.

**f. Budget for the project and further elaboration on funding source and selection as needed to supplement (b) above).**

With the signing of the Guaranteed Maximum Price (GMP) by Consigli, which contains a thorough review of the market and supply chain for materials as well as contingency budgets in the event of challenges, the final project costs can be established at approximately \$13,500,000 inclusive of contingencies that fall within the System’s responsibilities, rather than Consigli’s. In the absence of unanticipated fiscal challenges, it is anticipated that the System will seek a final authorization for expenditures of less than \$700,000.

**g. Alternatives that were considered to meet the need being addressed by this project.**

Previously addressed.

**h. Timeline for start, occupancy and completion.**

The project design is complete, many materials have been ordered, the GMP has been signed, pending City authorization renovations will begin in March, and the building will be occupied in October or November 2022, depending on construction speed.

**i. Timeline for any further consideration or action anticipated to be needed by the Board or its committees regarding this project if full authority is not being requested from the outset.**

It is anticipated that additional authorization may be requested to complete the project budget at a meeting prior to completion of the project.

**j. Additional information that may be useful to consideration of the item.**

Addressed in prior Board meetings.

**TEXT OF PROPOSED RESOLUTION:**

That the Finance Facilities and Technology Committee approves the following resolution to be forwarded to the Consent Agenda for Board of Trustee approval at the March 27-28, 2022 Board Meeting.

That the Board of Trustees accepts the recommendation of the Finance Facilities and Technology Committee and authorizes the University of Maine and the University of Maine School of Law, acting through the University of Maine System to expend an additional \$1,327,396 for a total of \$12,827,396 for the design, permitting, renovation and fit out of space at 300 Fore St, Portland. The funding sources will be gifts and other sources as identified by the Vice Chancellor for Finance and Administration and Treasurer and the Chancellor.

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University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Review of IT Projects with a Value of \$250,000 or Greater

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:** X

**BOARD ACTION:**

**BOARD POLICY:**

N/A

**UNIFIED ACCREDITATION CONNECTION:**

N/A

**BACKGROUND:**

Dr. David Demers, Chief Information Officer, will provide information on the following projects with a value of \$250,000 or greater:

- Classrooms for the Future
- Web Conferencing
- Wireless Infrastructure
- VoIP Projects
- MaineStreet Improvements – Schedule Builder
- Repaving MaineStreet

### US:IT Project Status Reports

<b>Report Date</b>	February 18, 2022
<b>Report Period</b>	December 11, 2021 - February 18, 2022

<b>PROJECT NAME:</b>	<b>Classrooms for the Future</b>	<a href="#">(Link to full report)</a>			
<b>Project Summary Update:</b>	This project has ended with a few remaining items to be completed post-closeout. These items include a small equipment order to be placed for UMA and UMaine with remaining contingency funds, completing remaining room assessments, completing maintenance reports, and preparing a final closeout report.				
<b>Sponsor</b>	<b>Original End Date</b>	<b>Current End Date</b>	<b>Total Budget</b>	<b>Budget Committed</b>	<b>% Complete</b>
	12/2019	12/2021	\$4,945,075	\$4,945,075	100%
<b>Project Health</b>	Overall <span style="color: green;">■</span> Budget <span style="color: green;">■</span> Schedule <span style="color: green;">■</span> Risk <span style="color: green;">■</span>				
<b>Tasks Completed During Last Period</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>				
<b>Upcoming Tasks/Milestones</b>	<ul style="list-style-type: none"> <li>Remaining maintenance reports</li> <li>Final report</li> <li>Contingency fund order for UMA and UMaine</li> </ul>				
<b>Current Issues / Risks</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>				

10.1

<b>PROJECT NAME:</b>	<b>Web Conferencing</b>	<a href="#">(Link to full report)</a>			
<b>Project Summary Update:</b>	Web conferencing installations have been completed at all campuses and the project is closed. Reassessments on all updated rooms are nearly complete.				
<b>Sponsor</b>	<b>Original End Date</b>	<b>Current End Date</b>	<b>Total Budget</b>	<b>Budget Balance</b>	<b>% Complete</b>
	12/31/21	12/31/21	\$2,563,650	\$191,800	100%
<b>Project Health</b>	Overall <span style="color: green;">■</span> Budget <span style="color: green;">■</span> Schedule <span style="color: green;">■</span> Risk <span style="color: green;">■</span>				
<b>Tasks Completed During Last Period</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>				
<b>Upcoming Tasks/Milestones</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>				
<b>Current Issues / Risks</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>				

<b>PROJECT NAME:</b>	<b>Wireless Infrastructure</b>		<a href="#">(Link to full report)</a>		
<b>Project Summary Update:</b>	This project will be complete this summer. The project budgets will be closed once final invoices are received.				
<b>Sponsor</b>	<b>Original End Date</b>	<b>Current End Date</b>	<b>Total Budget</b>	<b>Budget Expended</b>	<b>% Complete</b>
Jeffrey Letourneau	12/2018	12/2021	\$13,215,000	\$13,195,685	100%
<b>Project Health</b>	Overall <span style="color: green;">■</span> Budget <span style="color: green;">■</span> Schedule <span style="color: green;">■</span> Risk <span style="color: green;">■</span>				
<b>Tasks Completed During Last Period</b>	<ul style="list-style-type: none"> <li>• Installation of fiber optic cabling on Gorham campus</li> <li>• Cabling installation at LAC</li> </ul>				
<b>Upcoming Tasks/Milestones</b>	<ul style="list-style-type: none"> <li>• Receipt of final electronics</li> <li>• Processing of final invoices</li> <li>• Minor punch list items with cabling contractor</li> </ul>				
<b>Current Issues / Risks</b>	<ul style="list-style-type: none"> <li>•</li> </ul>				

10.1

<b>PROJECT NAME:</b>	<b>UMF VoIP</b>		<a href="#">(Link to full report)</a>		
<b>Project Summary Update:</b>	Work on this project is completed. The project budget will be closed once final invoices are received.				
<b>Sponsor</b>	<b>Original End Date</b>	<b>Current End Date</b>	<b>Total Budget</b>	<b>Budget Committed</b>	<b>% Complete</b>
Jeffrey Letourneau	9/2021	12/2021	\$499,000	\$484,215	100%
<b>Project Health</b>	Overall <span style="color: green;">■</span> Budget <span style="color: green;">■</span> Schedule <span style="color: green;">■</span> Risk <span style="color: green;">■</span>				
<b>Tasks Completed During Last Period</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>				
<b>Upcoming Tasks/Milestones</b>	<ul style="list-style-type: none"> <li>• Processing of invoices for final orders</li> </ul>				
<b>Current Issues / Risks</b>	<ul style="list-style-type: none"> <li>•</li> </ul>				

<b>PROJECT NAME:</b>	<b>USM VoIP</b>		<a href="#">(Link to full report)</a>		
<b>Project Summary Update:</b>	All phone extensions in Gorham except emergency call boxes have been migrated from the legacy phone system. There is still significant work to be done to dismantle and dispose of the legacy equipment. Staff members are				

	currently working through each building on the Portland campus to migrate remaining lines and dismantle legacy equipment.				
Sponsor	Original End Date	Current End Date	Total Budget	Budget Expended	% Complete
Jeffery Letourneau	9/2022	9/2022	\$809,000	\$626,011	85%
Project Health	Overall <span style="color: green;">■</span> Budget <span style="color: green;">■</span> Schedule <span style="color: green;">■</span> Risk <span style="color: green;">■</span>				
Tasks Completed During Last Period	<ul style="list-style-type: none"> <li>Migration of phone extensions on the Gorham campus</li> </ul>				
Upcoming Tasks/Milestones	<ul style="list-style-type: none"> <li>Continue migration of remaining extensions on Portland Campus</li> </ul>				
Current Issues / Risks	<ul style="list-style-type: none"> <li>Delays in availability of electronic components are impacting the project schedule</li> <li>Capacity of human resources to complete project work is diminished during time of high ticket creation.</li> </ul>				

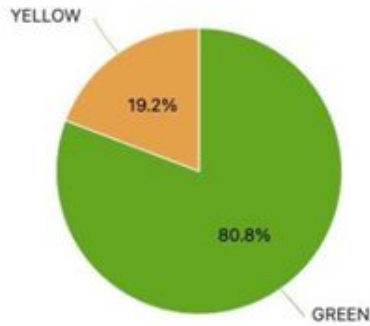
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PROJECT NAME:	<b>MaineStreet Improvements - Schedule Builder</b>			<a href="#">(Link to full report)</a>	
Project Summary Update:	The Functional Team has been assembled, met several times and is currently engaged in application testing. In addition to confirming expected functionality, the team is also performing data validation and logging error/issue tickets. Once initial testing is complete, the Functional Team will share feedback and configuration requests with the Technical Team. The target go-live date has been selected to align with the advising schedule for the 2022/2023 Academic Year.				
Sponsor	Original End Date	Current End Date	Total Budget	Budget Balance	% Complete
David Demers	May 2022	May 2022	\$1,148,237	\$623,479	35%
	<i>Completion date of Schedule Builder module implementation</i>				
Project Health	Overall <span style="color: green;">■</span> Budget <span style="color: green;">■</span> Schedule <span style="color: green;">■</span> Risk <span style="color: green;">■</span>				
Tasks Completed During Last Period	<ul style="list-style-type: none"> <li>Functional Team Kickoff</li> <li>Additional project planning</li> <li>Technical point release application update</li> </ul>				
Upcoming Tasks/Milestones	<ul style="list-style-type: none"> <li>Continued application testing</li> <li>Support planning</li> </ul>				
Current Issues / Risks	<ul style="list-style-type: none"> <li>None</li> </ul>				

<b>PROJECT NAME:</b>	<b>Repaving MaineStreet</b>		<a href="#">(Link to full report)</a>		
<b>Project Summary Update</b>	The project is in the initiating phase and is currently focused on conducting an RFP process to select an Implementation Partner and developing an understanding of Oracle’s Finance and HCM Cloud solutions, and its Student Financials Planning module.				
<b>Sponsor</b>	<b>Start Date</b>	<b>Current End Date</b>	<b>Total Approved Budget</b>	<b>Current Budget Balance</b>	<b>% Complete</b>
David Demers	March 2022	December 2026	\$16,800,000	\$16,790,571	0%
<b>Project Health</b>	Overall <span style="color: green;">■</span> Budget <span style="color: green;">■</span> Schedule <span style="color: green;">■</span> Risk <span style="color: green;">■</span>				
<b>Tasks Completed During Last Period</b>	<ul style="list-style-type: none"> <li>• Awarded RFP for Implementation Partner to ERP Analysts.</li> <li>• Conducted in-depth demos of Oracle’s Finance and HCM cloud Solutions and its Student Financials Planning cloud solution.</li> <li>• Conducted meetings with institutions that have migrated from on-premise versions of PeopleSoft Financials and HRMS to the Oracle Cloud versions.</li> </ul>				
<b>Upcoming Tasks/Milestones</b>	<ul style="list-style-type: none"> <li>• Meeting with an institution that utilizes PeopleSoft Campus Solutions as its SIS and that has implemented Oracle’s Student Financials Planning (Financial Aid) cloud solution.</li> <li>• Preliminary initiative planning meetings with Implementation Partner.</li> </ul>				
<b>Current Issues / Risks</b>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>				

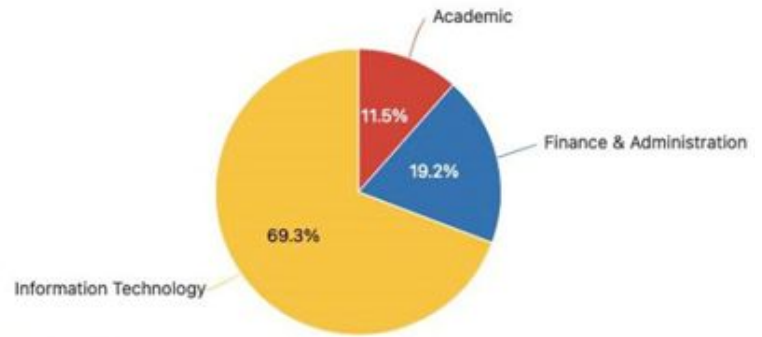
10.1

**Active Project Health**



Project Health	Count
GREEN	21
YELLOW	5
<b>Total</b>	<b>26</b>

**Active Projects by Category**



**Total Budget of Active Projects**

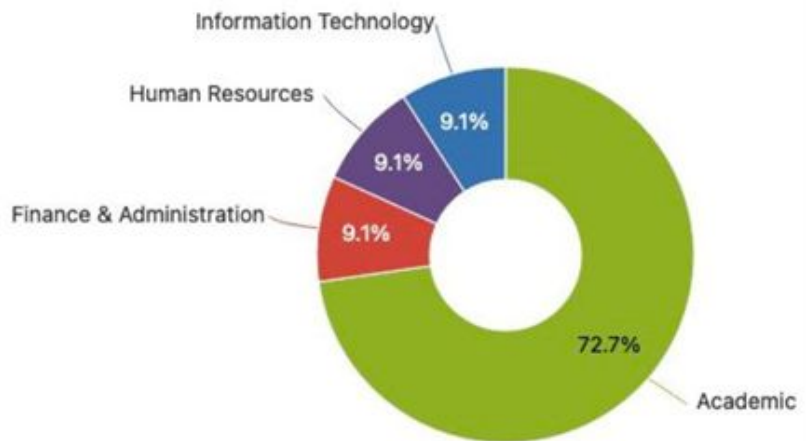
	Sum of Budget
<b>Total</b>	<b>\$44,663,077.00</b>

Category	Count
Academic	3
Finance & Administration	5
Information Technology	18
<b>Total</b>	<b>26</b>

10.1

**Initiating Projects & RFPs**

Category	Count
Academic	8
Finance & Administration	1
Human Resources	1
Information Technology	1
<b>Total</b>	<b>11</b>







# US:IT Project (>\$250,000) Review

**Finance – Facilities – Technology Committee**


**March 10, 2022**



**University Services**  
**Information Technology**


10.2






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## US:IT Project (>\$250,000) Review

### Overview



Project	Budget	Status	Update	Projected Completion
<b>Classrooms for the Future</b>	\$4.945M	 100%	This project has been completed	Final contingency expenditures and punch-list items in progress. Campus maintenance reports to be delivered in March.
<b>Web Conferencing Upgrades</b>	\$2.563M	 100%	This project has been completed	172 Rooms across UMS upgraded to support Video Conferencing and Remote Participation
<b>UMS Wireless Infrastructure</b>	\$13.215M	 99%	Installation completed at all campuses aside from USM	Final fiber infrastructure work at USM-Gorham and cable installation at USM-LAC to be completed this summer
<b>VoIP (UMF; USM)</b>	UMF: \$499K USM: \$809K	 100%  85%	Project complete for UMF; ongoing migration of analog phones at USM	Electronic component availability has delayed project schedule at USM.

2

## US:IT Project (>\$250,000) Review

### Classrooms for the Future

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- **Project Impact**
  - 259 Fully Transformed Classrooms (46.3%)
  - Sample Improvements:

Component	Before	After
<b>Projection</b>	VGA Resolution 2-3K Lumen (Bulb)	HD Resolution (HDMI Input) 5K Lumen (Laser)
<b>Screens</b>	Standard 4:3 aspect ratio	HD 16:9 aspect ratio
<b>Audio</b>	Portable 12W computer speakers	Ceiling Mounted 32W Amplified Speakers
<b>Microphones</b>	Few rooms with available microphone input	Ceiling or Table-top beam-tracking microphones with digital audio mixer for echo and background noise cancellation
<b>Cameras</b>	Few rooms with available videoconferencing cameras	HD (1080p) 30X Optical Zoom Cameras

3

10.2

## US:IT Project (>\$250,000) Review

### MaineStreet User Experience Enhancements: - Schedule Builder

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**Project Budget - \$1.15M**

Remaining	\$623,479
Expended	\$524,758

**CX Interface (100%)**

**Schedule Builder (35%)**








Overall status: ■

Budget status: ■

Schedule status: ■


Project	Initiation Date	Sponsor	Original Estimated Completion Date	Current Estimated Completion Date	Initial Budget	Current Budget Balance	Project % Complete
Overall UX Enhancements	September 2018	David Demers	Varies by module (see below)		\$1,148,257	\$623,479	Varies by module (see below)
Campus Experience Module	September 2018		January 2019	September 2021			100%
Schedule Builder Module	October 2021		May 2022	May 2022			35%

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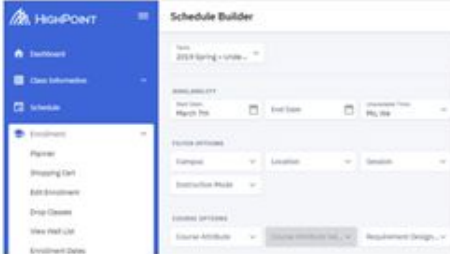

## US:IT Project (>\$250,000) Review



### MaineStreet User Experience Enhancements: - Schedule Builder

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- **MaineStreet Schedule Builder:**
  - Allows students, advisors and staff to build schedules for a term based on the student's availability and selected set of courses.
  - Search Parameters: Term, Start/End Dates, Days, Times, Section Duration


10.2

5



## US:IT Project (>\$250,000) Review


### MaineStreet User Experience Enhancements: - Schedule Builder

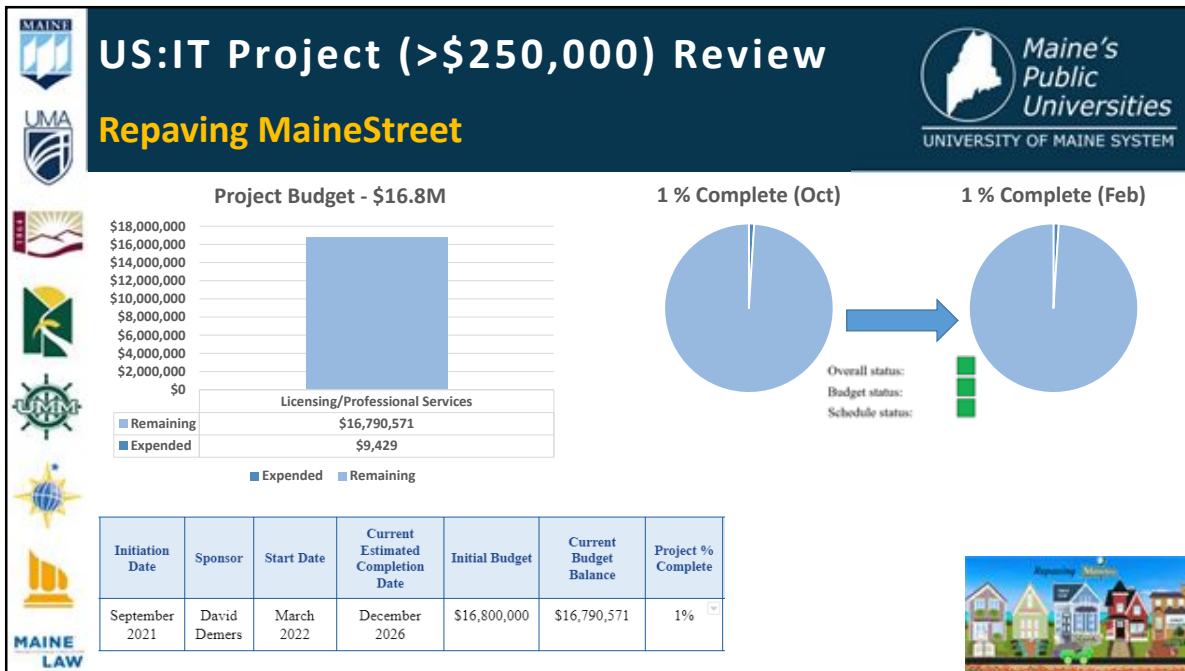
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- **MaineStreet Schedule Builder:**
  - With preferred courses identified, Schedule Builder will generate multiple possible schedules for the student/advisor to review
  - Results may be saved, shared with Advisor
  - \*Ability to automatically add course schedule to MaineStreet Registration Cart forthcoming
  - Saves students time normally spent manually comparing different sections/schedule options; replicating selections to register in MaineStreet
  - Anticipate full availability in May 2022

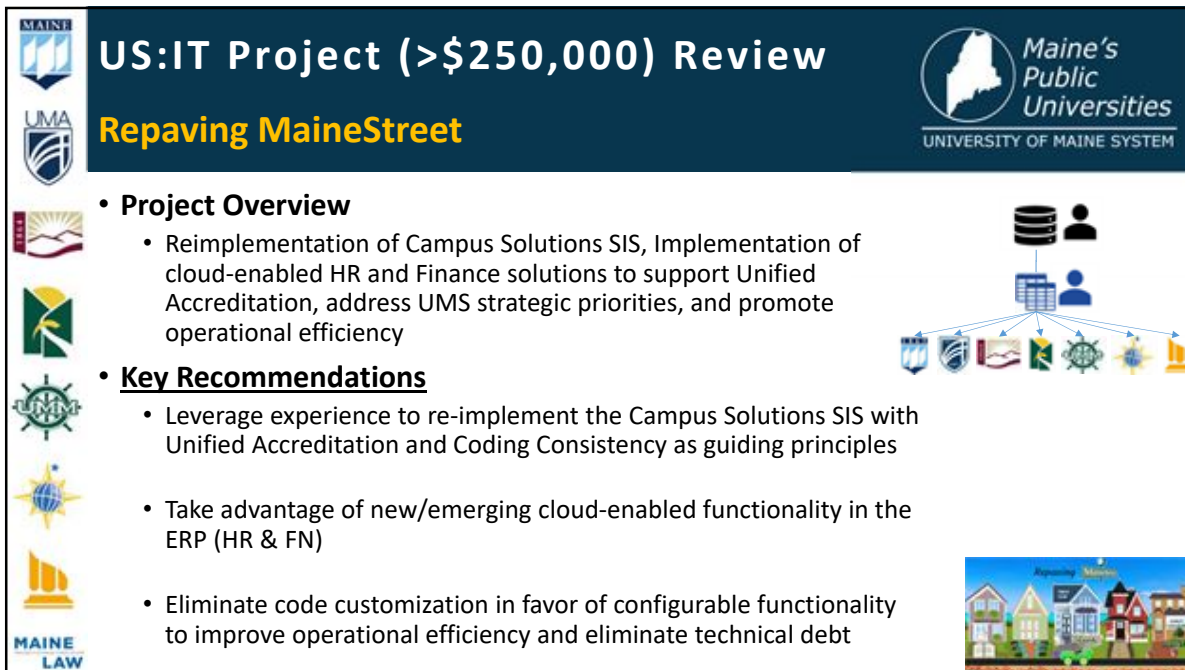


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10.2

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## US:IT Project (>\$250,000) Review

### Repaving MaineStreet



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**Goals:**








- **Improve end-user experience navigating administrative functionality for students, faculty, staff**
  - Mobile friendly, accessible self-service functionality; expanded automation
- **Expand access to degree programming offered across the University**
  - Leverage global resources, knowledge and expertise across UMS
  - Unified Course Catalog
- **Improve operational and functional efficiency**
  - Expanded use of automation and inherent functionality
  - Enhanced Degree Planning/Audit Functionality

**“New” MaineStreet Experience**





10.2

9

## US:IT Project (>\$250,000) Review

### Repaving MaineStreet



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**Recently Completed:**

- **Completed RFP for Implementation Partner**
  - *Awarded to ERP Analysts*
- Conducted demos of Oracle cloud solutions (Finance/HCM/Student Financials Planning)
- Meetings with institutions that have completed similar migrations

**Upcoming:**

- *Meeting with institution implementing Student Financial Planning module alongside Campus Solutions SIS*
- *Preliminary meetings with implementation partner; development of initial project roadmap*
- *Align staffing to support overall project objectives, including the addition of several Subject Matter Experts*

Functional Areas
Admissions
Financial Aid
Student Records
Student Financials
Advising
Human Resources
Finance (Planning & Budgeting, Procurement, GL, AR)



10

University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** State of IT 2021 Report

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:** X

**BOARD ACTION:**

**BOARD POLICY:**

N/A

**UNIFIED ACCREDITATION CONNECTION:**

N/A

**BACKGROUND:**

Dr. David Demers, Chief Information Officer, will share highlights from the State of IT 2021 Report, including:

- COVID-19 Pandemic Management
- Information Security and Compliance
- Network Infrastructure Upgrades
- Development of UMS Desktop Computing Hardware Standards

Link to Report: [wpsites.maine.edu/stateofitreport/](https://wpsites.maine.edu/stateofitreport/)



# UMS State of IT Report 2021

**Finance, Facilities & Technology Committee**  
**March 10, 2022**



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**University Services**  
**Information Technology**

11.1

1



# UMS State of IT Report 2021



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- **Electronic Format**
  - [wpsites.maine.edu/stateofitreport](https://wpsites.maine.edu/stateofitreport)
- **Report Focus/Themes**
  - UMS IT's role in Supporting COVID-19 Pandemic Management
  - Information Security & Compliance
  - Network Infrastructure Upgrades
  - UMS Desktop Computing Hardware Standards




[wpsites.maine.edu/stateofitreport](https://wpsites.maine.edu/stateofitreport)

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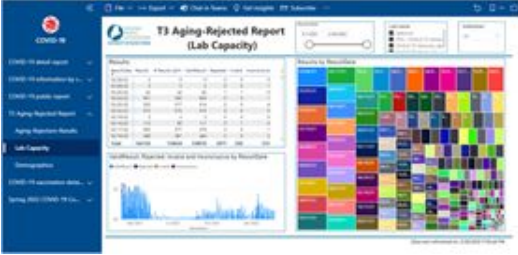








## UMS State of IT Report 2021










**Maine's  
Public  
Universities**  
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- **UMS COVID-19 Pandemic Management**
  - **2020**
    - **New services and tools rapidly launched to support remote teaching, learning**
      - *Remote Computer Lab Service*
      - *Virtual Laboratory Simulation Catalog*
      - *Online Examination Proctoring*
  - **2021**
    - **Robust data analysis and systems required to support Campus COVID-19 management activities**




11.1

3










## UMS State of IT Report 2021










**Maine's  
Public  
Universities**  
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- **UMS COVID-19 Pandemic Management**
  - **New Services**
    - **UMS-COVID-19 Portal**
      - Support UMS-wide COVID-19 testing and vaccination compliance efforts
      - Clearance Status Badge/Shield
    - **Sara Alert Contact Tracing Platform**
      - Platform selected by ME CDC to coordinate contact tracing efforts; available for all campuses to use for internal contact tracing




4













## UMS State of IT Report 2021



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- **UMS COVID-19 Pandemic Management**
  - **Data Management Tools**
    - **Interactive Data Dashboards to support campus pandemic response, including:**
      - UMS-COVID-19 Testing Detail Report
      - UMS COVID-19 Campus Information
      - UMS COVID-19 Asymptomatic Test Public Report
      - ShieldT3 Test Aging Report
      - UMS COVID-19 Vaccination Detail Report
      - UMS COVID-19 Compliance Report

11.1

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## UMS State of IT Report 2021









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- **Information Security & Compliance Assessment**
  - UMS Information Security Office coordinating series of security assessments to help address cybersecurity risks and vulnerabilities
    - “Defense in Depth” approach
    - Support for UMaine Research compliance requirements, including Department of Defense requirements for Controlled Unclassified Information (CUI)
  - Adoption of National Institute of Standards and Technology (NIST) controls to facilitate informed progress tracking



6










## UMS State of IT Report 2021









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- **Information Security & Compliance Assessment**
  - Multi-Factor Authentication
    - Testing for rollout of Duo MFA service in progress
      - 2-step authentication requiring UMS SSO credentials (username & password) along with 2<sup>nd</sup> factor delivered via Smartphone or dedicated hardware token/fob
    - Promote secure, authenticated access to digital assets; protect personal information and intellectual property
      - Prevention of unauthorized account login, even if password has been compromised





7

11.1










## UMS State of IT Report 2021



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- **Network Infrastructure Upgrades**
  - **Elimination of Legacy phone systems**
    - UMPI; USM
  - **Completion of Maine Research and Education Network Northern Ring Upgrade**
    - Aggregate 100Gbs bandwidth (5X Increase)
  - **Negotiated UMS/MSLN Transport Services**
    - \$5.2M Annual Contract awarded to 5 transport providers
    - Established minimum MSLN connectivity of 1.0Gbps for all\* participants
      - \*95%

8

# UMS State of IT Report 2021

- **UMS Desktop Computing Hardware Standards**
  - UMS has historically been plagued with a lack of consistent desktop computing hardware standards
    - Currently, UMS IT supports over 700 different PC models/configurations
  - **Results in:**
    - Inconsistent support
    - Higher cost
    - Delayed upgrades
  - *In 2019, UMS contracted with Dell to provide standard PC hardware options, along with additional services, including:*
    - Asset tagging & reporting
    - OS Imaging at Factory
    - Asset resale and Recycling
    - Warehousing of critical inventory

11.1

9

# UMS State of IT Report 2021

- **UMS Desktop Computing Hardware Standards**
  - UMS IT, in collaboration with campus IT support staff and Dell, completed the initial UMS Desktop Computing Standards and Purchasing Guidelines
    - **Goals:**
      1. Optimize computer refresh cycle
      2. Reduce number of unique models/configurations supported across UMS
      3. Significantly reduce total cost of ownership (acquisition, deployment, support, warranty & repairs)
        - *Baseline savings estimate = \$150-\$250,000 annually*
      4. Maximize investment in desktop computing expenditures across UMS

10

University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Robie-Andrews Hall Revitalization Project, USM

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:** X                    **BOARD ACTION:**

**BOARD POLICY:**

701 – Budgets, Operating & Capital  
802 – Disposition of Real Property

**UNIFIED ACCREDITATION CONNECTION:**

N/A

**BACKGROUND:**

The University of Maine System (UMS) acting through the University of Southern Maine (USM) is evaluating options for the potential rehabilitation/redevelopment of the Robie-Andrews residence hall. Robie-Andrews Hall has a current NAV of 3.4% with \$23.1 million of deferred maintenance. USM has utilized the consulting firm of Brailsford & Dunlavey (B&D) to analyze the nature of the facilities for potential private redevelopment that would be compatible with the University’s education, research, and public service mission. The University established a Project Team of USM and UMS staff to advise B&D and the Project Team participated in the evaluation, analysis, and determination of market demand. The Project Team and B&D believe a renovation through a developer that takes advantage of the federal and state Historic Tax Credit Program is an economically viable and strategically beneficial option to pursue.

A companion informational presentation reviewing this initiative and the Project Team recommendations is attached for further review as part of this briefing.



# University of Southern Maine

**ROBIE-ANDREWS REINVESTMENT PLAN  
FFT PRESENTATION  
MARCH 2022**



12.1



## Executive Summary

### Robie-Andrews Reinvestment

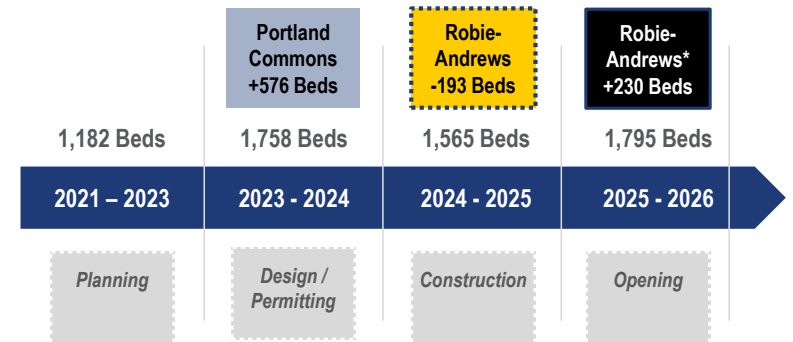
- As USM further enhances its campuses, **the University must balance affordability with reinvestment efforts.**
- **Robie-Andrews' low NAV** prompts consideration of replacement; however, its historical significance makes it a **candidate for a comprehensive renovation.**
- **The renovation of Robie-Andrews offers an opportunity to maintain affordability** by utilizing historic tax credits (HTCs) **while maximizing efficiency and increasing the number of revenue generating beds** through the relocation of the Art Department. **12.1**
- **Soliciting a developer with experience utilizing historic tax credits** would be critical to successfully renovating Robie-Andrews and ensuring alignment with ongoing University planning efforts.

# Executive Summary

## Robie-Andrews Reinvestment Strategy

- ✓ \$24 million investment in Robie-Andrews returns building to 100% NAV (\$27M total with Art Department)
- ✓ Moves Art Department to new space (\$3M); significantly upgrades facilities; co-locates faculty and studio space
- ✓ Art Department would need to be relocated during rehab process → permanent move enables creation of additional beds
- ✓ Increases bed count (~37) to 230; maintains GSF/bed
- ✓ USM would seek to use historic tax credits to fund ~1/3 of project, self-funding the remaining 2/3

### Housing Plan Timeline



\*Note: Figure includes 37 additional beds in assumed renovation plans



Building Program	Existing	Proposed
<b>Total Beds</b>	193	<b>230 (+37)</b>
Traditional Single	31	40 (+9)
Traditional Double	162	160 (-2)
Semi-Suite Single	0	30 (+30)
<b>GSF/Bed</b>	302	<b>300</b>

# Existing Conditions

## Robie-Andrews Hall Overview



Overview	
Total Beds:	193
Existing NAV:	3.4%
Total Residential GSF:	58,221
Total Non-Residential GSF:	19,407

### Major Building Challenges

- Roofing
- Exterior issues
- Envelope issues
- Heating issues / no AC
- Breaker issues
- Mechanical issues
- Efficiency / Aesthetics – windows, energy loss
- Interior issues



12.1



## Existing Conditions

Exterior issues: roofing, damaged brick work, window challenges, chipped and peeling paint, etc.



## Existing Conditions

Interior issues: raised ceiling tiles, warped / settled flooring, exposed pipes, water damage, lack of AC, etc.



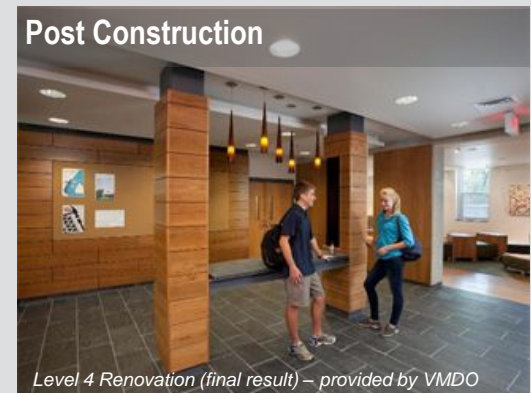
# Renovation Recommendation

<b>Level One</b> Basic Minimum Renovations	<b>Level Two</b> Interior Upgrades	<b>Level Three</b> Space and Systems Upgrades	<b>Level Four</b> Comprehensive Renovation/Expansion
---	---------------------------------------	--	---

**LEVEL ONE, TWO, AND THREE ACTIVITIES, AND:**

- › Complete building systems upgrades; fully concealed utilities
- › Completely redesigned interior and exterior spaces, including altering existing structure, gutting the building
- › Full ADA accessibility
- › Reconfigured units for efficient GSF/bed
- › Considering of additional amenities: classrooms, community kitchens, etc.

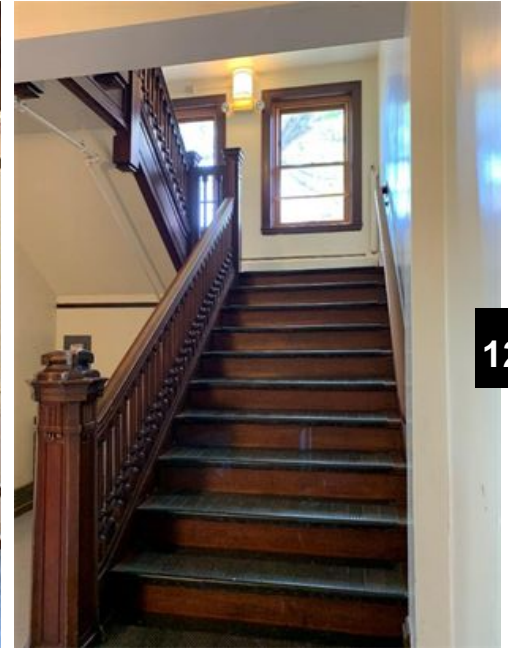
*Due to extensive deferred maintenance needs, Robie-Andrews requires a Level Four renovation*



**12.1**

## Rehabilitation Upgrade Opportunity

Historic Elements: Large windows, unique woodwork, expansive doorways, vintage staircases and ceilings.



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# Financial Considerations

## Project Costs

### Total Project Cost (2021\$)

*Based on local market data and recent comparable projects*

### Revised Project Cost (2021\$)

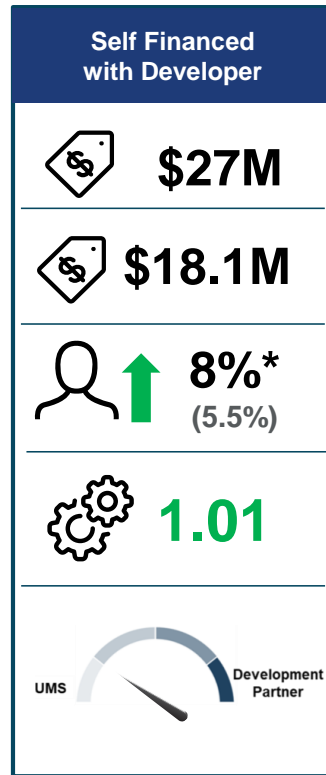
*Based on potential HTC savings (~82%)*

### Average Rental Rate Increase

*Over three-year timeframe*

### Minimum DCR (YR2)

### Comprehensive Risk



### Historic Tax Credit via Developer

- 25% State / 20% Federal of total construction costs
- \$8.9 million in potential total savings for Robie-Andrews Renovation (82% of tax credit, based on UMaine experience)
- Approximately \$18.1M to be financed/financed

12.1

*\*Note: Reflects average annual inflation (2.5%) and rental rate increase (5.5%) over three-year period.*

# Peer Analysis

## Rental Rate Comparison

USM's monthly rental rates are currently **below** its regional peers. The proposed rental rate increase will align the university more closely with the peer average.

	UNIVERSITY TYPE	AVERAGE MONTHLY RENTAL RATE (FY22)	UNIT TYPES	AMENITIES
<b>St. Joseph's College of Maine</b>	Private	<b>\$1,054</b>	Traditional + Suites	Floor lounges
<b>University of New England</b>	Private	<b>\$885</b>	Traditional + Suites	Study rooms, community kitchens
<b>UMaine – Orono</b>	Public	<b>\$845</b>	Traditional, Suites, Apartments	Study rooms, community kitchens
<b>Thomas College</b>	Private	<b>\$829</b>	Traditional, Suites, Apartments / Townhouses	Floor lounges, community kitchens
<b>Husson University</b>	Private	<b>\$802</b>	Traditional, Suites, Apartments / Townhouses	Classrooms, community lounges, etc.
<b>University of Southern Maine</b>	Public	<b>\$727</b>	Traditional, Suites, Apartments	Study rooms, community kitchens



\*\*\*Note: This four-story, 105,000-SF residence hall located on UNE's Biddeford campus offers students suite-style living. The 300-bed residence hall also includes laundry and mail facilities, and a community kitchen located off the main lounge.



\*\*Note: This new 66,000-SF, five-story multipurpose building includes both learning environments and suite-style living space for 245 students.

\*Note: Additional case studies provided in addendum

*Robie-Andrews Reinvestment Plan  
Addendum:  
Robie-Andrews Existing Conditions Images*

12.2

# Robie-Andrews Hall

## Existing Conditions



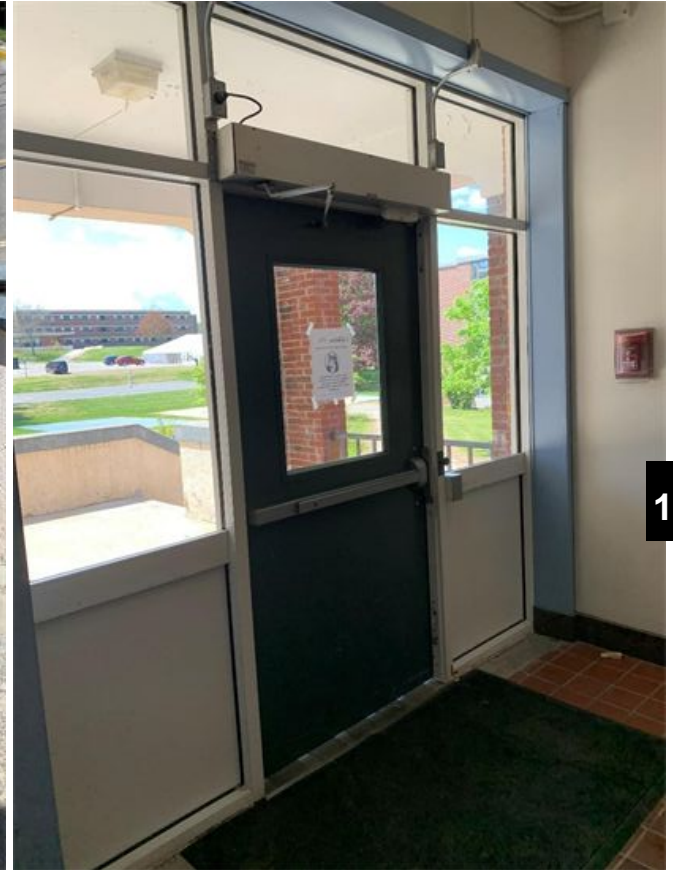
## Major Building Challenges

- Slate roof
- Exterior issues
- Envelope issues
- Mechanical issues
- Heating issues / no HVAC
- Aesthetics – windows, energy loss
- Interior issues

12.2



**Exterior and interior issues: deteriorated exterior staircase, dated interior vestibule**



**Mechanical and interior issues: exposed pipes, outdated systems**



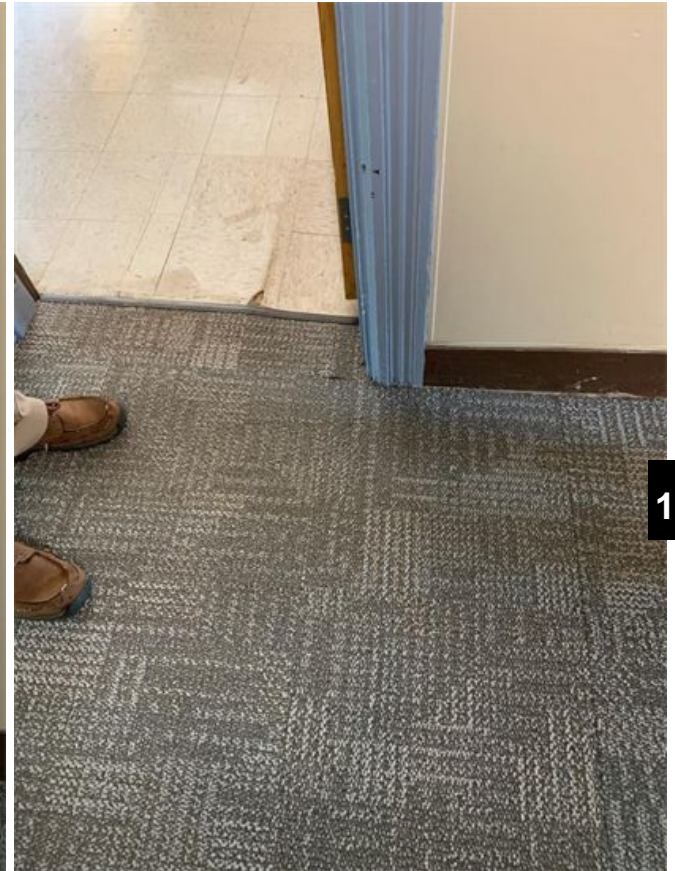
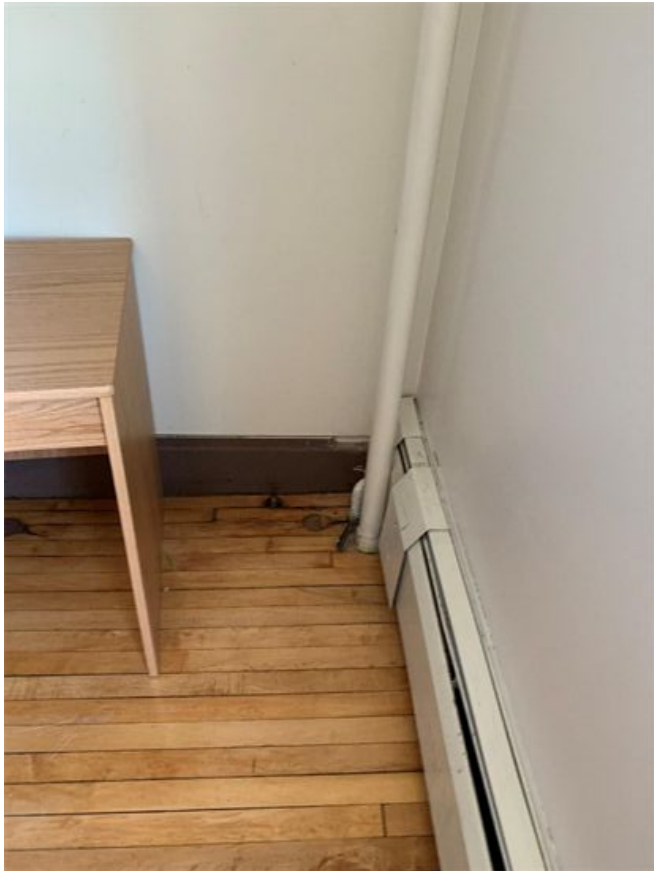
12.2

**Mechanical and interior issues: outdated systems, asbestos impacted flooring**



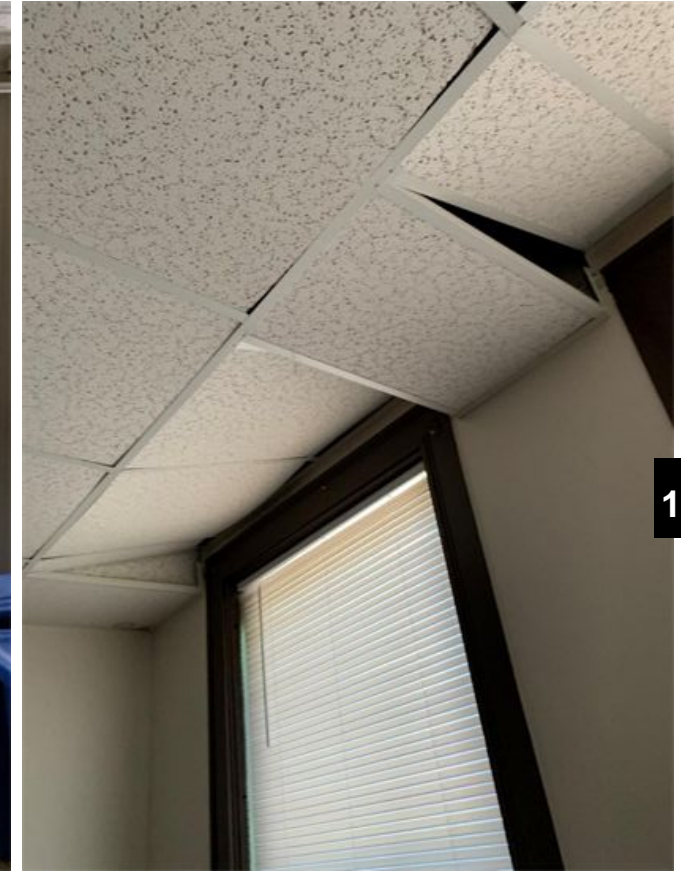
12.2

**Interior issues: lifting wood flooring, uneven floors, etc.**



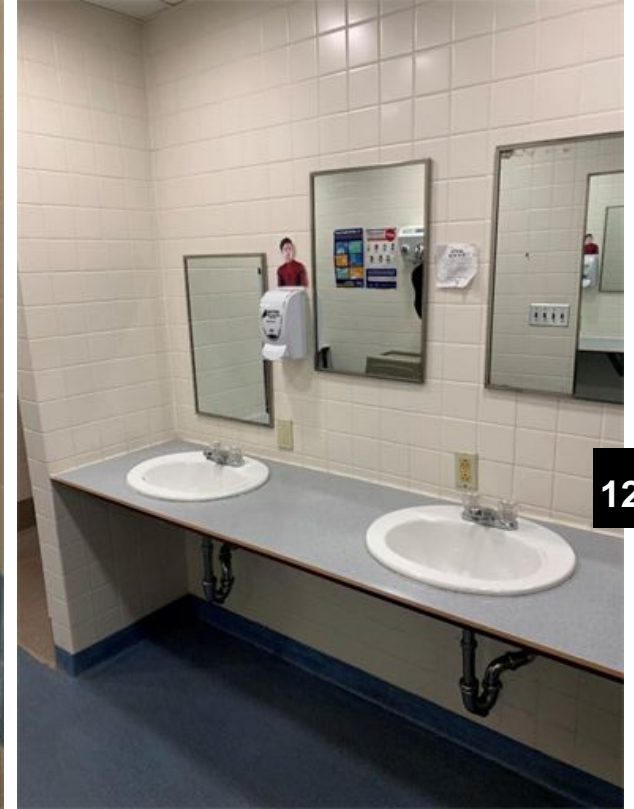
12.2

**Interior issues: exposed pipes, vintage vestibule, lifting ceiling tiles**



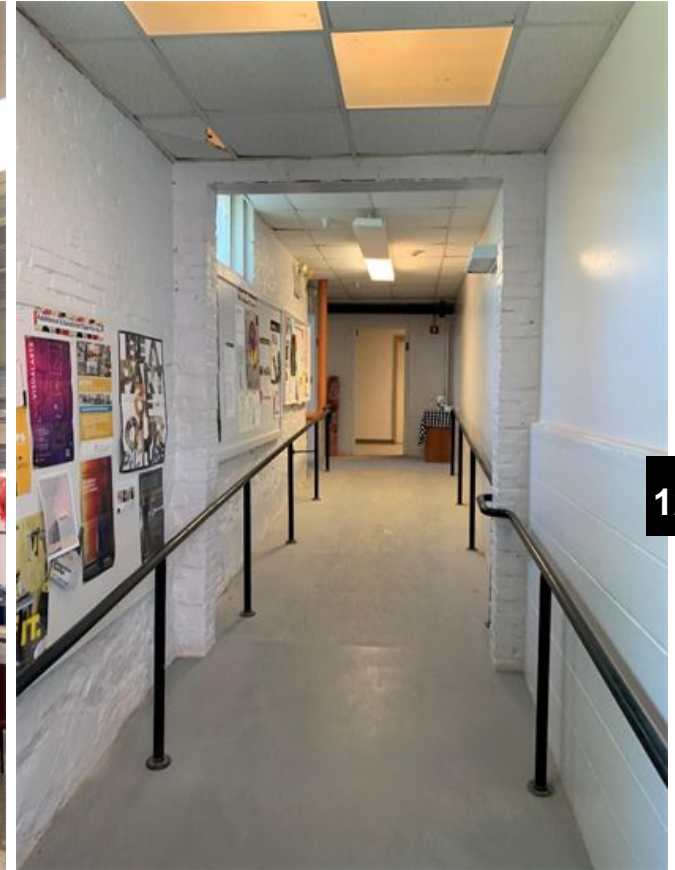
12.2

**Interior issues: outdated residential bathrooms**



12.2

**Interior issues: exposed pipes, missing ceiling tiles, narrow walkways**



12.2

*Addendum:  
Peer Case Studies*

12.2



## Case Studies

### Husson University – Darling Learning Center



### Husson University's Living Learning Center

**Total GSF:** 61,500

**Total beds:** 240

**Number of stories:** 5

*“The Living Learning Center is a multi-use building composed of **faculty offices, classrooms, circulation space and dormitories.** The building has many **sustainable design** features, one of which is the orientation of the building, maximizing the **passive solar heat gain** for the residential suites in the winter, thus limiting the time the heating system will be used. In the classrooms, the goal was to capture and distribute as much natural light as possible and utilize **automatic lighting control systems.** The Living Learning Center is seen as a **“new beginning project”** for the campus that is expected to be a symbol of the University's commitment to **quality education, rich student life, and care for the environment.**”*

12.2

## Case Studies

### University of New England – Sokokis Hall



Courtesy of Allied Cook



Courtesy of Allied Cook



Courtesy of Allied Cook

### Sokokis Hall

**Year Built:** 2010  
**Total GSF:** 105,000  
**Total beds:** 300  
**Number of stories:** 4

*“Sokokis Hall, named after the Sokokis tribe that settled in the region, was built in 2010. It is a four-story, suite-style building with 4-person rooms. Units are singles and doubles.*

*All of the suites include kitchenettes with full-sized refrigerators, cabinets, microwaves and sinks, as well as living rooms and spacious bathrooms. Study lounges are located on each floor, and a large community lounge and fitness center are located on the ground floor.*

*Site amenities include a community kitchen, laundry, a pond surrounded by a large green, bordered by a quarter-mile walking/running trail.”*

*The new residence hall is LEED Silver Certified.*

12.2

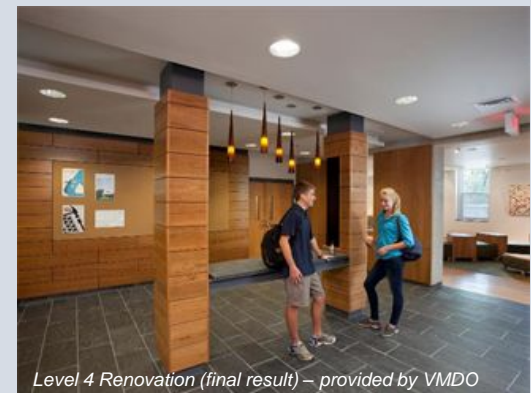
*Addendum:  
Renovation Level Details*

12.2

## Renovation Recommendations

Level One Basic Minimum Renovations	Level Two Interior Upgrades	Level Three Space and Systems Upgrades	Level Four Comprehensive Renovation/Expansion
<ul style="list-style-type: none"><li>› Hazardous materials abatement</li><li>› Accessibility upgrades</li><li>› Replace bath fixtures/accessories</li><li>› New floor residential floor finishes, replace all walls</li><li>› Replace 2-pipe FCU HVAC system</li><li>› Code required upgrades</li><li>› Improve public space finishes</li><li>› Upgrade wireless throughout buildings</li></ul>			

*Due to extensive deferred maintenance needs, Robie-Andrews requires a Level Four renovation*

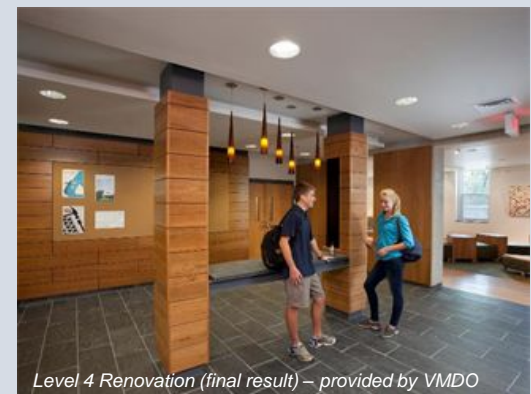


12.2

## Renovation Recommendations

<b>Level One</b> Basic Minimum Renovations	<b>Level Two</b> Interior Upgrades	<b>Level Three</b> Space and Systems Upgrades	<b>Level Four</b> Comprehensive Renovation/Expansion
<b>LEVEL ONE ACTIVITIES, AND:</b>			
<ul style="list-style-type: none"><li>› New lighting</li><li>› Plaster or drywall over concrete, block, new ceilings</li><li>› Concealed conduit for power and telecom</li><li>› Enhance existing bathrooms and community spaces</li><li>› Upgrade floor finishes from Level One</li><li>› Replace doors, frames, hardware</li></ul>			

*Due to extensive deferred maintenance needs, Robie-Andrews requires a Level Four renovation*

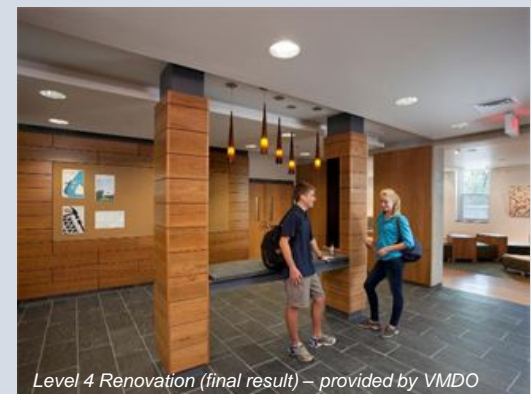


12.2

## Renovation Recommendations

Level One Basic Minimum Renovations	Level Two Interior Upgrades	Level Three Space and Systems Upgrades	Level Four Comprehensive Renovation/Expansion
<b>LEVEL ONE AND TWO ACTIVITIES, AND:</b> <ul style="list-style-type: none"><li>› Add mechanical ventilation with energy recovery</li><li>› Develop modernized “wet core” baths</li><li>› Insulate exterior walls</li><li>› Enhanced lighting and HVAC controls, door access</li></ul>			

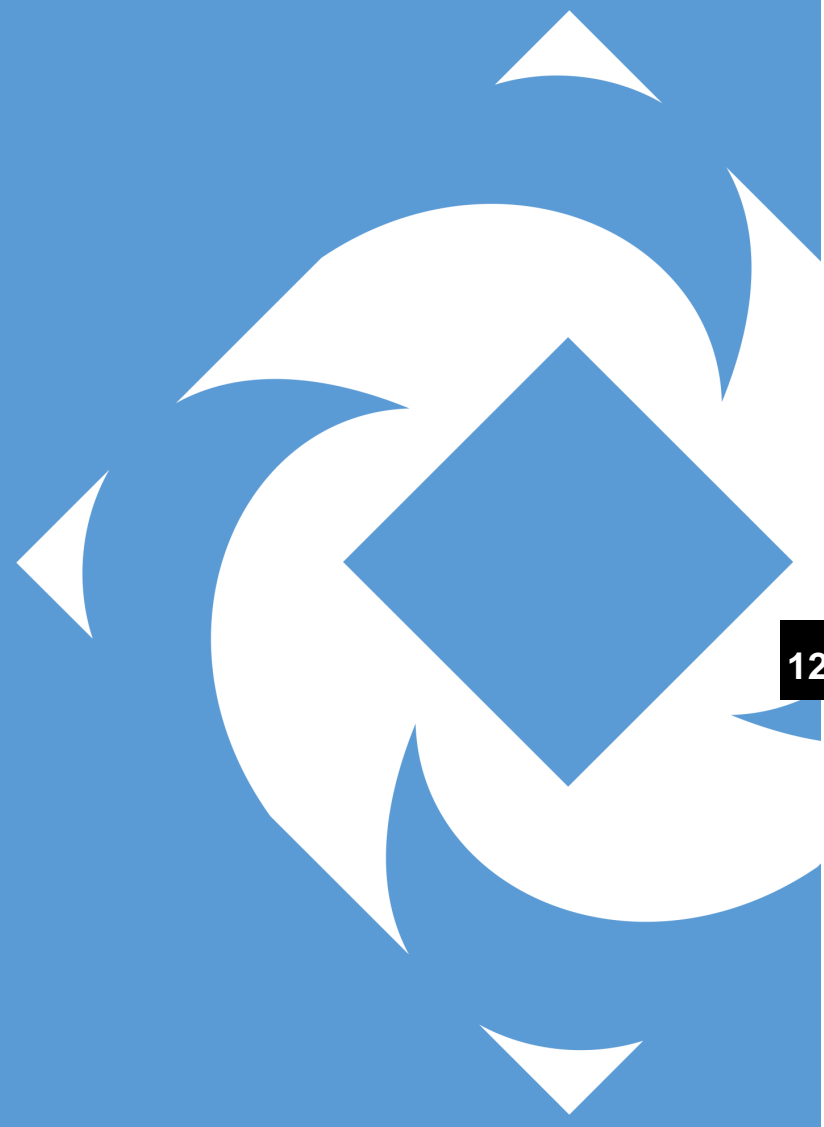
*Due to extensive deferred maintenance needs, Robie-Andrews requires a Level Four renovation*



12.2

**Thank you.**

VISIT [BDCONNECT.COM](https://www.bdcconnect.com)  
FOR MORE INFORMATION.



12.2

University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Capital Projects Status Report and Bond Projects Update, UMS

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:** X

**BOARD ACTION:**

**BOARD POLICY:**

**UNIFIED ACCREDITATION CONNECTION:**

**BACKGROUND:**

**Executive Summary**

Overview:

Attached is the Capital Project Status Report for the March 10, 2022, meeting of the Finance, Facilities and Technology Committee. The report reflects a total of 26 projects. Four projects: USM's IPE Lab and Dubyak Center; UM's Priority 1 Athletics Fields; and UMF's 274 Front Street Renovation, were added as of this report and one project was removed: UM's ASCC W2 Expansion and Equipment project. Note that the projects highlighted in yellow reflect current P3 projects. Additionally, projects which are at Board approval level utilizing Harold Alford Foundation (HAF) grant and matching money are highlighted in green. HAF projects below Board approval level are noted in a separate table at the end of the report as well.

While the number of Board approved projects has remained in the range of about 20 for the past few years, the total dollar value of these approved projects, at over \$250 million, has increased nearly four times over the past two years.

COVID-19 Impacts on Capital Construction:

Projects continue to move forward however, impacts continue.

- Previously reported impacts continue to be relevant.
  - Various material shortages and delays continue along with labor shortages in many construction trades, causing schedule and cost impacts to our projects.
  - Inflation and cost escalation over the past year has been much higher than the norm, in most cases accounting for increases of over 20%.

Bond Project Status Report:

The special portion of this report calling out only projects funded with the 2018 State bonds reflects fifty-one (51) projects; an increase of two projects; one at UMA and one at USM. The projects are currently estimated to account for over \$45 million of the \$49 million in voter approved general obligation bond funding. Over \$22 million of that has been expended.

Supplemental funding is being leveraged for some of these projects and the total estimated project value across all funds is nearly \$63 million, including the bond funding and other project resources.

02/28/2022



- Eleven (11) of the active bond projects also appear on the Capital Project Status Report with approved budgets above Board threshold.
- One (1) project is expected to be brought to the Board for additional authorization as design progresses but is currently in pre-design phase with budget below the Board approval threshold.
- The remaining bond funded projects do not have budgets that meet the threshold for Board of Trustees consideration and are therefore not present on the Capital Projects Status Report. As projects are closed they will be moved to the completed projects section on this report and will remain on the report for documenting purposes until all Bond Projects are completed.
- The Completed project section reflects 13 projects that are complete. There are another eighteen projects in the active projects table listed as complete and substantially complete. These will move to the completed section once closeout is finalized.

Research space approvals:

No new approvals to report at this time.

Residence Hall Lock replacements:

Both USM and UM will undertake lock replacement projects during the summer of 2022 and 2023 in a number of their residence halls. In all two halls at USM and six halls at UM will be completed in 2022 and at UM nine will be completed in 2023. Individually none of these projects reach Board authorization threshold. However, the combined cost is over two million dollars.

HEERF funded projects:

As reported in the campus budget discussions, some of the campuses have Federal Relief Funds available and are using it to contribute to capital projects. These projects mainly encompass ventilation or HVAC (heating, ventilation, air conditioning) type projects. Two such projects were brought forward for Board consideration by UMA since the dollar value exceeded the \$500,000 threshold. However, a number of smaller projects are also being completed, mainly at USM and UMA, which fall below that threshold. To date, UMA has identified 11 projects totaling approximately \$3.3 million and USM has identified eleven projects totaling two million dollars all to be funded with this money. Utilization of the funding on the proposed projects is reviewed centrally to ensure it meets the intent of the funding.

Harold Alfond Foundation (HAF) Grant funded projects:

Planning for the Priority 1 Athletics fields continues with bidding and equipment procurement underway.

Master Planning for the MCECIS portion of the work continues.

USM Portland Development Project:

Four levels of the eight story wings of the Portland Commons are in place. Interior wall framing and utilities are being installed in these areas. Career and Student Success Center superstructure framing is complete. Floor slabs have been placed for the second and third story areas. Underslab utility installation is in progress for the first-floor areas. The building connector hall footings have been started.

02/28/2022

UM Ferland Engineering Education & Design Center Project:

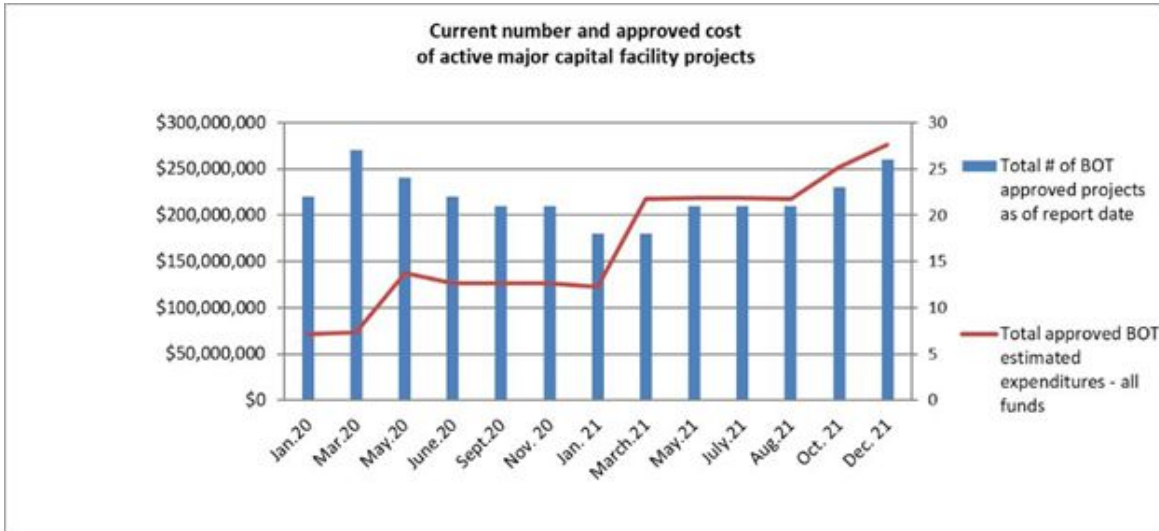
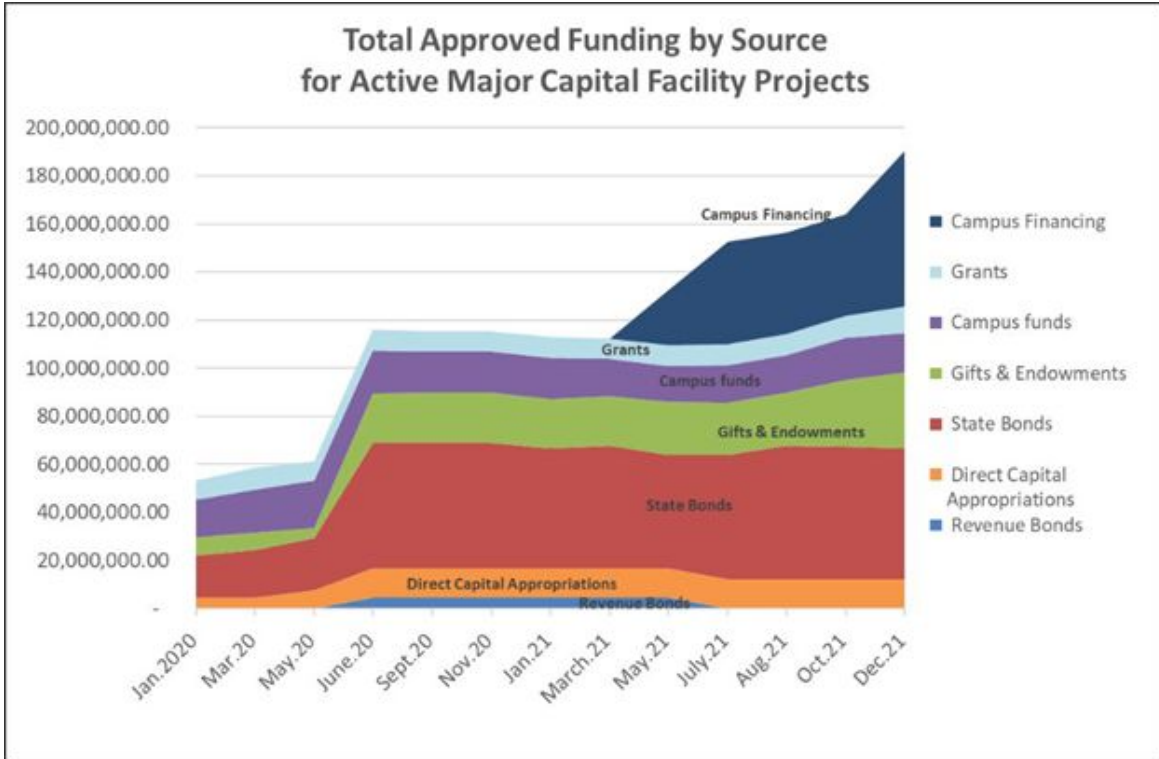
On the third floor painting, acoustical ceiling installation, ceramic tile flooring in restrooms and laboratory equipment installation is in progress. On the second floor drywall installation is nearing completion and wall painting and ceramic tile installation in the restrooms is in progress. On the first floor mechanical, plumbing and electrical rough-in is nearing completion and drywall installation and taping is underway. The temporary steam heat source for the building for this winter continues to operate properly, providing appropriate temperatures for installation of finishes. MEP rough-in continues in both the penthouse and basement with the building electrical power expected to be turned on in early March. The startup of the building mechanical systems will follow the turning on of the building electrical power. The brick veneer installation has been completed except for an area on the east side of the building used to move materials into the building on the second and third floors. The granite veneer installation continues to progress around the building. Window frame, glazing and metal panel installation is in progress on all sides of the building. The project continues to track within a few weeks of the original project schedule.

UM Advanced Structures and Composites Center (ASCC) Factory of the Future 1.0 equipment research project:

The University of Maine's ASCC is working on a grant funded "CONFIDENTIAL" equipment research project called Factory of the Future 1.0. As part of the project, building modifications within the Offshore Wind Laboratory (OWL) will be required. The ASCC is working with UM Facilities Management and CPPM to identify the required modifications. While this is a research equipment project and is exempt from Board authorization, it is included here given the unique tie-in to the building structure. The modifications once fully developed may result in upgrades to the facility in excess of \$500,000.

UMPI Solar Array Project:

The UMPI solar array project is moving along. All support "cages" and cabling are in place and panel installation is ongoing.



\*Direct Capital Appropriations funds consist of capital appropriations in anticipation of revenue bonding, as well as MEIF funds.

\*\* Campus Financing demonstrates the use of interim financing in the form of a Bond Anticipation Note as approved at the March 2021 meeting of the Board.

**Capital Project Status Report**  
**Board Approved Projects**  
**March 2022 - Finance, Facilities and Technology Committee**  
**With Grand Totals and % of Current Approved Estimates**

Campus, Project Name (Project ID)	Funding Source(s) & each source's share of expenditures to date	Status	Original Estimated Completion	Current Est. Completion	Original Approved Estimate	Current Approved Estimate	Total Expense to Date	% Expended of Current Approved Estimate	Prior Actions, Information & Notes
<b>UMA</b>									
Katz Library Repairs (1200061)	HEERF (100%)	Design in Progress	2021	2022	\$1,100,000	\$1,100,000	\$31,284	3%	Board approved \$1.1M Sept 2021.
Randall Welcome Center (1100085)	2018 State Bond (100%)	Substantially Complete	2021	2022	\$2,150,000	\$2,150,000	\$1,667,273	78%	Board approved \$2.15M May 2021. The approval of 1100085 in May of '21 replaces 1100077.
Handley Hall A/C replacement (1200029)	E&G (2%) HEERF (98%)	Design in Progress	2020	2022	\$575,000	\$1,230,000	\$26,433	2%	Board approved \$575K in September, 2019. Board approved \$1.2M in Emergency Relief Funds and up \$30k in E&G funds in Sept '21.
<b>UM</b>									
ASCC Building Addition GEM Lab (5100579)	Other (100%)	Pre-Design in Progress			\$1,500,000	\$1,500,000	\$4,029	0%	Board approved \$1.5M May 2021.
Darling Marine Center Waterfront Infrastructure (5100459, 5100460, 5100461, 5100574)	Gifts (3.3%), Campus E&G Funds (33.7%), Grants (61.5%), State Appropriations (1.5%)	Project # 5100574 is Bidding in Progress. The rest are Substantially Complete	2017	2022	\$3,000,000	\$5,410,000	\$4,948,387	91%	Board approved \$3M in July, 2017. Board approved increase of \$2.2M in September, 2019. Additional \$210k approved by Chancellor in December.
**UM Ferland Engineering, Education and Design Center (5100458, 5100493, 5100546, 5200604)	Campus Funds (3%), State Approp (34%) Gifts (7%) Campus Financing (54%) (Other 2%)	Construction in Progress	2024	2024	\$1,000,000	\$78,000,000	\$35,237,566	45%	Board approved \$1M in September, 2017. Board approved additional \$8M in May, 2018. Additional \$63M BOT approved March, 2020 Initial occupancy of this facility is expected in 2022; final completion in 2024. Board authorized up to \$78M in Jan' 22.
ASCC Renovation - Mezzanine Office Expansion (5100525)	Campus E&G Funds (15%) Grants (85%)	Substantially Complete	2020	2022	\$450,000	\$1,400,000	\$1,030,174	74%	Board approved \$1,400,000 March, 2020
UM Energy Center Phase II (5100516, 5100517)	Campus E&G Funds (79%) Grants (21%)	Pre-Design in Progress	2023	2022	\$5,700,000	\$5,700,000	\$483,203	8%	Board approved \$5.7M March, 2019.
Neville Hall Renovations (5100534)	2018 State Bond (100%)	Construction in Progress	2021	2022	\$1,500,000	\$1,500,000	\$337,137	22%	Board approved up to \$1.5M expenditure in March 2021.
UM Adaptive Reuse project/Historic P3 (5200661)	Campus Funds (27%) Other (73%)	Design in Progress	2023	2023	\$2,000,000	\$2,000,000	\$301,676	15%	Board authorized for UM contribution of up to \$2M in October 2021.
*UM Priority 1 Athletics fields (5100593, 5100594, 5100597)		Design in Progress	2023	2023	\$14,000,000	\$14,000,000			Board authorized \$14M in January 2022.
<b>UMF</b>									
Dearborn Gym HW Upgrades (2100087)	2010 State Bond (10%) 2018 State Bond (90%)	Complete	2019	2022	\$600,000	\$850,000	\$846,267	100%	Board approved \$600K in March, 2019. Board approved additional \$250K in May, 2019.
*274 Front St Renovation (2100096)	2018 State Bond (100%)	Design in Progress	2020	2022	\$450,000	\$3,100,000	\$37,278	1%	Board approved up to \$3.1M in January 2022.
<b>UMFK</b>									
UMFK Enrollment/Advancement Center (3100042)	2018 State Bond (100%)	Substantially Complete	2022	2022	\$3,249,000	\$3,249,000	\$2,689,736	83%	Board approved \$2.99M in Bond Funding, March, 2020. Plus, \$259K for a total of \$3,249,000.

**Capital Project Status Report**  
**Board Approved Projects**  
**March 2022 - Finance, Facilities and Technology Committee**  
**With Grand Totals and % of Current Approved Estimates**

Campus, Project Name (Project ID)	Funding Source(s) & each source's share of expenditures to date	Status	Original Estimated Completion	Current Est. Completion	Original Approved Estimate	Current Approved Estimate	Total Expense to Date	% Expended of Current Approved Estimate	Prior Actions, Information & Notes
<b>USM</b>									
**Bailey Hall Fire Protection and Electrical Upgrades (6100316, 6100323)	2018 State Bond (36%), Campus E&G (64%)	Project 6100316 is Substantially Complete, Project 6100323 is Complete	2019	2021	\$2,580,000	\$4,388,000	\$4,130,959	94%	Board approved \$2.58M in January, 2019. Additional authorization of \$1,808,000 for a total of \$4,388,000 in January 2020
Career and Student Success Center and Portland Residence Hall (6100325, 6100338)	2018 State Bond (31%), Campus Financing (69%)	Construction in Progress	2020	2023	\$1,000,000	\$99,400,000	\$22,370,876	23%	Board approved \$1M in January, 2019. Board approved predevelopment expenditures of up to \$5.7M combined for the two projects in January 2020. Board approved an increase by \$93.7M in February 2021.
USM Center for the Arts (6100300)	Gifts (100%)	Design in Progress	2022	2023	\$1,000,000	\$4,200,000	\$853,135	20%	Board approved \$1M in January, 2018. Board authorized an additional \$3.2M for a total of \$4.2M in November 2021.
Port Parking Garage Study (6100331)	Campus E&G Funds (100%)	Design in Progress	2022	2023	\$1,200,000	\$23,000,000	\$483,464	2%	Board approved in March 2020 with initial spending limit of \$400,000; addtl \$800,000 authorized by the Chancellor and Vice Chancellor for Finance and Administration and Treasurer in April, 2021. Board authorized a new total of \$23m in November, 2021.
**Fitness Equipment Purchase and Space Renovation USM Gorham Costello Gym Reno (6100370), Sullivan Gym Equip Repl (6100371), LAC Gym Equip Repl (6200295)		Design in Progress	2020	2022	\$700,000	\$770,000	\$0	0%	Board Approved March, 2020. No expenditures as of yet. An increase of \$70k was authorized by the Chancellor to \$770k in December 2021.
USM Steam Line (6100361)	Campus E&G Funds (100%)	Completed	2021	2021	\$600,000	\$600,000	\$599,932	100%	Board approved \$600K in May 2021
*USM Dubyak Center (6100342)	Gifts (100%)	Design in Progress	2022	2022	\$2,500,000	\$2,500,000	\$30,000	1%	Board approved up to \$2.5 million in January, 2022. \$1M of bond funds to cover the total \$2.5m project budget. Addtl \$1.5M funding is from Maine Jobs Recovery funds.
*USM IPE Lab (6200286)	Gifts (100%)	Design in Progress	2022	2022	\$482,000	\$900,000	\$82,825	9%	Authorized by FFT at \$900,000
<b>UMS/Law School</b>									
**300 Fore St Portland Renovation (8100152)	Gifts (100%)	Bidding	2022	2022	\$6,000,000	\$11,500,000	\$617,414	5%	Board approved \$6M September 2021. Board approved increase to \$11.5M in Jan '22

**Capital Project Status Report**  
**Board Approved Projects**  
**March 2022 - Finance, Facilities and Technology Committee**  
**With Grand Totals and % of Current Approved Estimates**

Campus, Project Name (Project ID)	Funding Source(s) & each source's share of expenditures to date	Status	Original Estimated Completion	Current Est. Completion	Original Approved Estimate	Current Approved Estimate	Total Expense to Date	% Expended of Current Approved Estimate	Prior Actions, Information & Notes
<b>UMPI</b>									
**Wieden Renovation Bond (7100025)	2018 State Bonds (100%)	Design in Progress	2020	2023	\$3,757,000	\$6,257,000	\$422,029	7%	Board approved \$3.7M May 2021. Board approved an addtl \$2.5 million Jan 2022. Bond funded portion remains at \$3,757,000 (the addtl funding is from gifts and internal loan).
**Folsom 105 Nursing Renovation (7100026)	2018 State Bonds (100%)	Complete	2020	2022	\$800,000	\$760,000	\$719,300	95%	Board approved \$800K March, 2020. Budget reduced by \$40K due to funds to Wieden Renovation.
UMPI Solar Array (7100023)	Campus E&G (100%)	Construction in Progress	2020	2022	\$700,000	\$1,144,240	\$155,015	14%	Board approved \$700K June, 2020. Board approved an increase to \$1,144,240 during the August 2021 Executive Committee.

**HAF projects which are currently below board level**

Campus, Project Name (Project ID)	Funding Source(s) & each source's share of expenditures to date	Status	Original Estimated Completion	Current Est. Completion	Total Expense to Date	Prior Actions, Information & Notes
**UM - Engineering Ph III - MCECIS Master Planning (5200692)	HAF Grant/HAF Match (100%)	Pre-Design	TBD	TBD	\$83,481	HAF Funded project. Below Board level.
**UM - HAF Athletics Master Plan (5200696)	HAF Grant/HAF Match (0%)	Pre-Design	TBD	TBD	\$0	HAF Funded project. Below Board level.
UM - Morse field Turf Replacement (5100559)	Campus Funds (100%)	Substantially Complete	2021	2021	\$445,517	HAF Funded project. Below Board level.

Explanatory Notes: * Project is new as of this report. ** Details of this project include updates since the last report. *** This project has been completed since the last report and is not expected to appear on the next report. Highlighted: Board level HAF and P3 Projects	Funding source(s) reflects primary source(s) for project.		Calendar Year unless otherwise noted.				Percentage expended reflects total expended as of December 31, 2021 as a percentage of the current approved project estimate.
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**Bond Project Status Report**  
**Active Bond Projects**  
**March 2022 - Finance, Facilities, and Technology Committee**  
**With Grand Totals and % of Current Approved Estimates**

Campus, Project Name (Project ID)	Status	Original Estimated Completion	Current Est. Completion	Funding Source(s) & each source's share of expenditures to date	Estimated Bond Funding for Project	Bond Funding Expended	Total Estimated Project Cost	Prior Actions, Information & Notes
<b>UMA</b>								
**Bangor Campus Welcome Center (1100534)	Substantially Complete	2021	2022	Bond (95%) Campus (5%)	\$475,000	\$436,501	\$475,000	
**Randall Welcome Center (1100085)	Substantially Complete	2021	2022	Bond (100%)	\$1,750,000	\$1,667,273	\$2,150,000	Board approved \$2.15M May 2021. The approval of 1100085 in May of '21 replaces 1100077.
Randall 2nd Floor Renovations (1100083)	Construction in Progress	2021	2022	Bond (100%)	\$100,000	\$59,334	\$100,000	
**Randall Center Student Lounge (1100084)	Substantially Complete	2021	2022	Bond (100%)	\$150,000	\$137,873	\$150,000	
**Randall Admissions Renovations (1200083)	Construction in Progress	2021	2022	Bond (100%)	\$154,096	\$22,088	\$154,096	
*ACC Nursing Upgrades (1200082)	Construction in Progress	2022	2022	Bond (85%) Campus (15%)	\$50,000	\$0	\$50,000	
<b>Total Bond for Campus</b>					<b>\$2,679,096</b>	<b>\$2,323,069</b>	<b>\$3,079,096</b>	
<b>UMF</b>								
**Scott Hall Renovations (2100092)	Complete	2019	2022	Bond (100%)	\$200,000	\$193,660	\$200,000	
**Scott North Renovation (2100109)	Complete	2021	2022	Bond (100%)	\$150,000	\$89,256	\$150,000	
**Scott South Renovations (2200102)	Complete	2022	2022	Bond (100%)	\$125,000	\$132,222	\$125,000	
Scott West Renovation (2100110)	Construction in Progress	2021	2022	Bond (100%)	\$175,000	\$57,371	\$175,000	
**Dakin Hall Shower Renovations (2100093)	Complete	2019	2022	Bond (100%)	\$200,000	\$95,707	\$200,000	
**Lockwood Hall Shower Renovations (2100094)	Complete	2019	2022	Bond (100%)	\$200,000	\$87,103	\$200,000	
**Stone Hall Renovations (2100095)	Complete	2019	2022	Bond (100%)	\$200,000	\$178,530	\$200,000	
**274 Front St Renovation (2100096)	Design in Progress	2020	2022	Bond 100%	\$1,400,000	\$32,279	\$3,100,000	Board approved up to \$3.1M in January 2022. \$1.4m in 2018 bonds, the remaining is from gifts, Maine Jobs Recovery Act funds and other congressional earmarks.
**FRC Roof Replacement (2100111)	Construction in Progress	2021	2022	Bond (100%)	\$60,000	\$36,690	\$60,000	
FRC Façade Replacement (2100112)	Design in Progress	2022	2022	Bond (100%)	\$60,000	\$24,621	\$60,000	
Exterior Painting Merrill Hall (2200096)	Design in Progress	2020	2022	Bond (100%)	\$40,000	\$4,454	\$40,000	
Olsen Center Renovations (2100102)	On Hold	2023	2023	Bond (100%)	\$1,900,000	\$71,385	\$1,900,000	Approved budget of \$300,000, as it remains in study/design phase.
**Mantor Library Renovations (2100103)	Complete	2021	2022	Bond (100%)	\$300,000	\$246,223	\$300,000	
**Campus ADA Ramps (2100104)	Construction in Progress	2021	2022	Bond (100%)	\$115,000	\$24,094	\$115,000	
Roberts HVAC Upgrade (2100106)	Design in Progress	2021	2022	Bond (100%)	\$150,000	\$30,661	\$150,000	
**Merrill Hall HVAC Upgrade (2100107)	Complete	2021	2022	Bond (100%)	\$400,000	\$35,127	\$400,000	
Ricker Addition Renovation (2100108)	Design in Progress	2021	2022	Bond (100%)	\$175,000	\$47,938	\$175,000	
Dearborn Gym Hot Water Upgrades (2100087)	Complete	2019	2021	Bond (100%)	\$850,000	\$846,267	\$850,000	

**13.2**

**Bond Project Status Report**  
**Active Bond Projects**  
**March 2022 - Finance, Facilities, and Technology Committee**  
**With Grand Totals and % of Current Approved Estimates**

Campus, Project Name (Project ID)	Status	Original Estimated Completion	Current Est. Completion	Funding Source(s) & each source's share of expenditures to date	Estimated Bond Funding for Project	Bond Funding Expended	Total Estimated Project Cost	Prior Actions, Information & Notes
<b>UMF</b>								
Mallet Front Porch Painting (2200103)	Complete	2021	2021	Bond (100%)	\$25,000	\$11,715	\$25,000	
UMF Purington Front Porch Painting (2200104)	Complete	2021	2021	Bond (100%)	\$22,000	\$7,250	\$22,000	
UMF Preble/Ricker Flooring (2200105)	Complete	2021	2021	Bond (100%)	\$35,000	\$24,775	\$35,000	
<b>Total Bond for Campus</b>					<b>\$6,700,000</b>	<b>\$2,233,589</b>	<b>\$8,400,000</b>	
<b>UM</b>								
Neville Hall Renovation (5100534)	Construction in Progress	2021	2022	Bond (100%), Campus E&G (0%)	\$1,500,000	\$377,122	\$1,500,000	Board approved up to \$1.5M expenditure in March 2021.
UMM Science Bldg Rm 010 Renovation (5100575)	Design in Progress	2021	2021	Bond (100%)	\$100,650	\$100,885	\$100,650	
<b>Total Bond for Campus</b>					<b>\$1,500,000</b>	<b>\$377,122</b>	<b>\$1,500,000</b>	
<b>UMFK</b>								
UMFK Enrollment/Advancement Center (3100042)	Substantially Complete	2022	2022	Bond (100%)	\$2,990,000	\$2,689,736	\$3,249,000	Board approved \$2.99M in Bond Funding, March, 2020. Plus, \$259K for a total of \$3,249,000.
<b>Total Bond for Campus</b>					<b>\$2,990,000</b>	<b>\$2,689,736</b>	<b>\$3,249,000</b>	
<b>UMM</b>								
Reynolds Renewal (4100047)	Construction in Progress	2021	2021	Bond (100%)	\$400,000	\$323,431	\$400,000	
Dorward Hall Roofing (4200048)	Construction in Progress	2021	2021	Bond (100%)	\$45,000	\$32,939	\$45,000	
<b>Total Bond for Campus</b>					<b>\$45,000</b>	<b>\$32,939</b>	<b>\$45,000</b>	
<b>USM</b>								
Career and Student Success Center (6100325)	Construction in Progress	2022	2023	Bond (100%)	\$19,000,000	\$6,921,267	\$26,551,000	Board approved \$1M in January, 2019. Board approved predevelopment expenditures of up to \$5.7M combined with the residence hall project in January 2020. Board approved an increase by \$93.7M in February 2021, of that amount, the specific budget for the CSSC is \$26.6M.
Bailey Hall Fire Protection and Electrical Upgrades (6100316, 6100323)	Project 6100316 Construction in Progress, Project 6100323 is Complete	2019	2021	Bond (40%), Campus E&G Funds (60%)	\$1,460,000	\$1,456,999	\$4,388,000	Board approved \$2.58M in January, 2019. Board approved additional \$1.808M in January, 2020.
Nursing Simulation Lab Science (6100327)	Complete	2021	2021	Bond (100%)	\$1,500,000	\$1,301,740	\$1,500,000	Board approved \$1.5M in January, 2020.
*USM Dubyak Center (6100342)	Design in Progress	2022	2022	Gifts (100%)	\$1,000,000	\$30,000	\$2,500,000	Board approved up to \$2.5 million in January, 2022. \$1M of bond funds to cover the total \$2.5m project budget. Addtl \$1.5M funding is from Maine Jobs Recovery funds.
<b>Total Bond for Campus</b>					<b>\$22,960,000</b>	<b>\$9,710,007</b>	<b>\$34,939,000</b>	

**13.2**



**Bond Project Status Report**  
**Active Bond Projects**  
**March 2022 - Finance, Facilities, and Technology Committee**  
**With Grand Totals and % of Current Approved Estimates**

Campus, Project Name (Project ID)	Status	Original Estimated Completion	Current Est. Completion	Funding Source(s) & each source's share of expenditures to date	Estimated Bond Funding for Project	Bond Funding Expended	Total Estimated Project Cost	Prior Actions, Information & Notes
<b>UMPI</b>								
**Wieden Renovation Bond (7100025)	Design in Progress	2020	2023	Bond (100%)	\$3,757,000	\$422,029	\$6,257,000	Board approved \$3.7M May 2021. Board approved an addtl \$2.5 million Jan 2022. Bond funded portion remains at \$3,757,000 (the addtl funding is from gifts and internal loan).
**Folsom 105 Nursing Renovation (7100026)	Complete	2020	2021	Bond (100%)	\$760,000	\$719,300	\$760,000	Board approved \$800K March, 2020. Reduced by \$40K due Wieden funding.
<b>Total Bond for Campus</b>					<b>\$4,517,000</b>	<b>\$1,141,329</b>	<b>\$7,017,000</b>	
<b>Totals:</b>					<b>\$41,391,096</b>	<b>\$18,507,790</b>	<b>\$58,229,096</b>	

<b>Completed Bond Projects</b>								
Augusta Campus Welcome Center (1100077)	Closed	2021	2021	Bond (100%)	\$350,388	\$350,388	\$350,388	UMA
Jewett Hall Boiler Design Work (1200062)	Complete	2021	2021	Bond (100%)	\$305,000	\$321,287	\$321,287	UMA
274 Front St Acquisition (2100089)	Complete	2019	2019	Bond (100%)	\$850,820	\$850,820	\$850,820	UMF
UMF Campus Paving (2100097)	Complete	2019	2019	Bond (100%)	\$97,338	\$97,338	\$97,338	UMF
FRC Floor Renovation (2100098)	Complete	2019	2019	Bond (100%)	\$209,503	\$209,503	\$209,503	UMF
Dakin Flooring, Ceiling, Light (2100105)	Complete	2021	2021	Bond (100%)	\$206,187	\$206,187	\$206,187	UMF
UMM Science Building Roof Replacement (4100042)	Complete	2020	2020	Bond (100%)	\$280,487	\$280,487	\$280,487	UMM
UMM Dorward Hall Roof Replacement (4100043)	Complete	2020	2020	Bond (100%)	\$296,092	\$296,092	\$296,092	UMM
UMM Sennett Roof Replacement (4100044)	Complete	2020	2020	Bond (100%)	\$201,257	\$201,257	\$201,257	UMM
UMM Reynolds Center Roof Repair (4200044)	Complete	2020	2020	Bond (100%)	\$154,226	\$154,226	\$154,226	UMM
UMM Site Work (4200045)	Complete	2020	2020	Bond (100%)	\$57,365	\$57,365	\$57,365	UMM
Woodward Hall Renovations (6100301)	Complete	2019	2019	Bond (86%), Campus E&G Funds (14%)	\$1,008,395	\$1,008,395	\$1,172,840	USM
Ricci Lecture Hall Renovations (6100308)	Complete	2019	2020	Bond (31%), Gifts (43%), Campus E&G Funds (26%)	\$172,010	\$172,010	\$564,197	USM
<b>Totals:</b>					<b>\$4,189,068</b>	<b>\$4,205,355</b>	<b>\$4,761,987</b>	
<b>GRAND Total (Active and Completed Projects)</b>					<b>\$45,580,164</b>	<b>\$22,713,145</b>	<b>\$62,991,083</b>	

Explanatory Notes: * Project is new as of this report. ** Details of this project include updates since the last report. Completed projects will remain on this report unless otherwise specified.	Funding source(s) reflects primary source(s) for project.	Calendar Year unless otherwise noted.	Bond Funding expended reflects total expended as of December 31, 2021.
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**13.2**

University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Gordian Annual Facilities Report, UMS

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:** X

**BOARD ACTION:**

**BOARD POLICY:**

N/A

**UNIFIED ACCREDITATION CONNECTION:**

N/A

**BACKGROUND:**

Gordian will present its annual facilities benchmarking and analysis findings regarding the University of Maine System's facilities and facility management operations.

Gordian will be available to present and discuss the annual report. While the entire updated report is attached for Trustees' information, in the interest of time, only selected slides will be reviewed during the live presentation.

A key metric formally adopted by Trustees – density, as a measure of the intensity or efficiency of the use of our space has generally flattened vs the longer-term downward trend. This is illustrated on Slide 7 in the slide numbering sequence. The flattening trend indicates the Trustee's commitment to constrain space combined with the stabilizing and slightly strengthening in user population of students, staff and faculty is making a difference. That commitment to space constraint is continuing in the current fiscal year as space reduction projects continue. Combined with a change in Gordian's methodology several years ago which had the effect of lifting UMS's baseline density, UMS has now attained the interim density goal, though UMS remains far less dense than public higher education overall and has a significant way to go to reach the established long term goal.

Beyond density, the Gordian data continues to reflect a challenging situation in which the condition of the University's facilities as measured by renovation age and net asset value have continued to decline. More than half of all University space has reached a renovation age of 50 years old or older, and the University is on pace to see that grow to 60 percent by 2025. This is illustrated on Slide 20 in the slide numbering sequence.

The measures of condition or quality of the University's facilities such as renovation age and net asset value are not expected to measurably improve overall until and unless substantially more financial investment is consistently made in existing facilities each year. For more than a decade, the University generally has invested \$20 million +/- in its existing facilities each year. The current Gordian target would have the University investing at least twice that amount annually in existing facilities.

2/28/2022

For a visual representation of this challenge, please see slide 38 (using the deck slide numbers) of the Gordian deck. Corresponding slides showing the campus view of this investment challenge are being included in this year's Fiscal Year 23 budget presentations to illustrate the challenge at each campus.

To help address this, the University has continued its focus on removing space and constraining the growth of space. The current financial crisis potentially provides the framework to make changes that have been evident to this group for some time. Continued work on a space management plan will focus discussions on which assets are not essential to the core mission and strategy of each institution. Divesting facilities will increase density and Net Asset Value.

The University also has been seeking new and novel sources of investment. Revenue bonds, public-private partnerships, potential new state support, energy services company agreements and other revenue sources are all being pursued or are in progress above and beyond more traditional E&G, grant or general obligation bond resources.

Additional slides of potential particular interest may include:

- Slide 7 shows the total gross square feet of space as tracked by Gordian since FY12.
- Slide 10 shows the stabilizing density, which had met the Trustees interim goal in FY19, but fell slightly in FY20 and FY21 due to decreases in enrollment and staffing. UMS remains well below the Public Higher Education average for density.
- Slides 18 and 20 show the continued increase in renovation age of the UMS portfolio, another measure of condition and investment. Over half of all UMS facility space now has a renovation age of 50 years old or greater.
- Slide 38 illustrates the ongoing gap between current investment levels and the levels that would be needed to stabilize and improve the net asset value of existing facilities.
- Slide 44 illustrates the long-term trend of deteriorating facility condition.
- Slides 46 and 47 illustrate two examples of where investments are making in difference in Net Asset Value at the campus level.
- The appendix (in the full slide deck starting at slide 69) contains an annual accounting of key performance indicators previously identified by Trustees in this area.

# The University of Maine System FY21 Return on Physical Assets Final Presentation

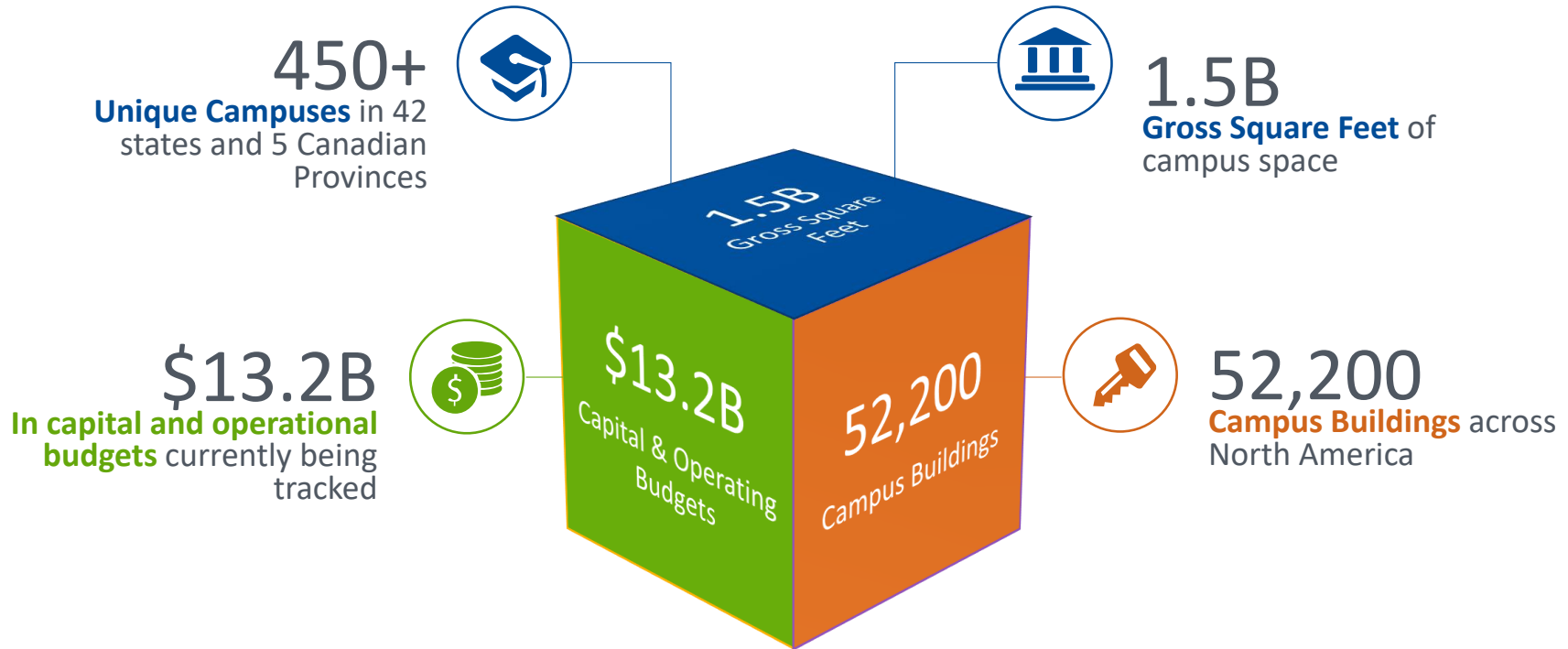
March 2022

University of the Sciences in Philadelphia  
University of Toledo  
University of Vermont  
University of Washington  
University of West Florida  
University of Wisconsin - Madison  
Vanderbilt University  
Virginia Commonwealth University  
Wake Forest University  
Washburn University  
Washington State University  
Washington State University - Tri-Cities Campus  
Washington State University - Vancouver  
Washington University in St. Louis  
Wayne State University  
Wellesley College  
Wesleyan University  
West Chester University  
West Virginia Health Science Center  
West Virginia University  
Western Oregon University  
Westfield State University  
Widener University  
Williams College  
Worcester Polytechnic Institute

14.1

# Gordian and Sightlines

Owners of the largest verified facilities database in higher education



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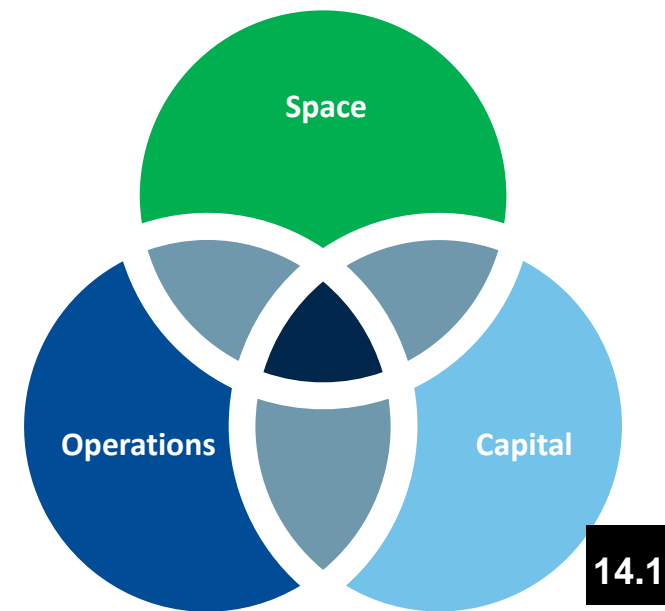
Sightlines members serve **over 20%** of US College Enrollment



# Integrated Campus Stewardship

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- FY2021 GSF remains steady; campus populations decrease. Density of system is below interim goal.
- Space continues to age. Space over 50 years old increases; space under 10 years old shifts into higher age brackets. Residential space is the oldest subset of space on campuses.
- The highest \$/GSF needs exist in the oldest buildings on campus
- Capital investment, despite increasing in FY21, is not able to slow the aging process of System assets in existing spaces; focus shifts toward new space.
- AIM data provides areas for opportunity in planned maintenance and project selection.



*Throughout the presentation UMS will be compared to the Gordian Public Higher Ed. Database Average for FY21. This subset of the database includes institutions like the University of Massachusetts, University of New Hampshire, University of Iowa, University of New Mexico and University of Connecticut.*

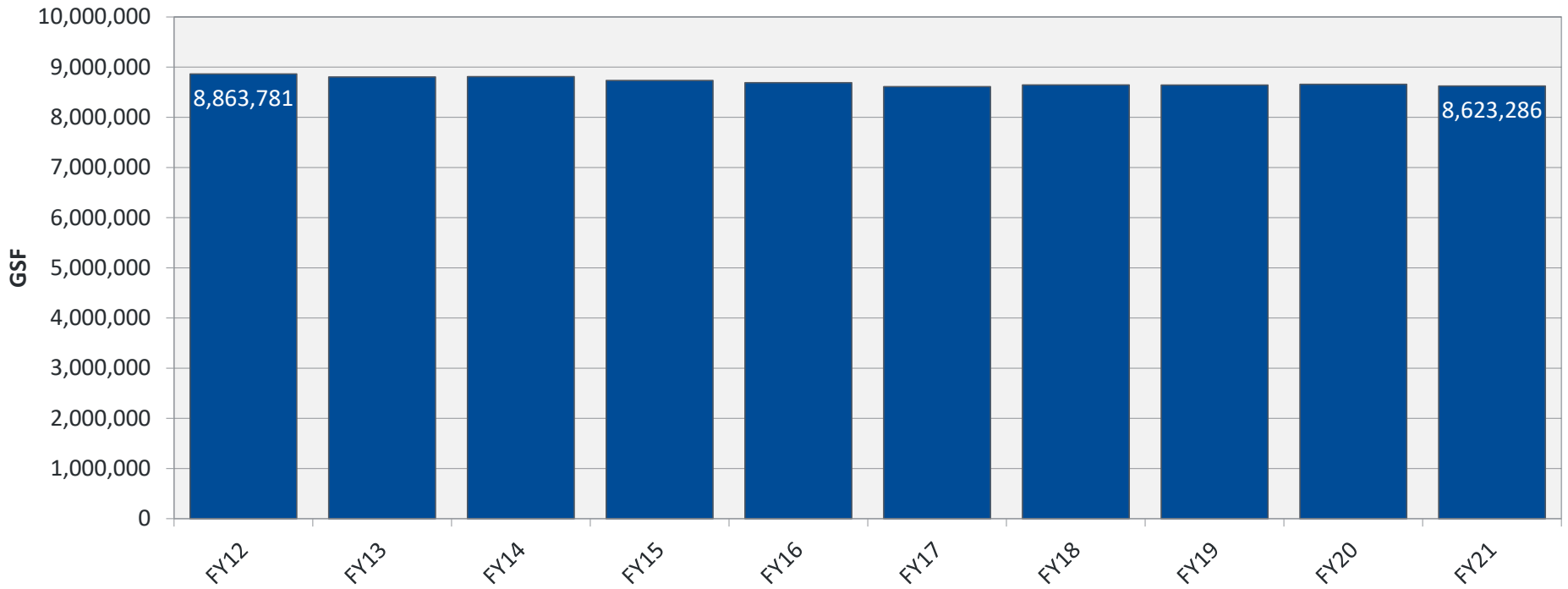


# Space Profile

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# UMS GSF

Total GSF Over Time



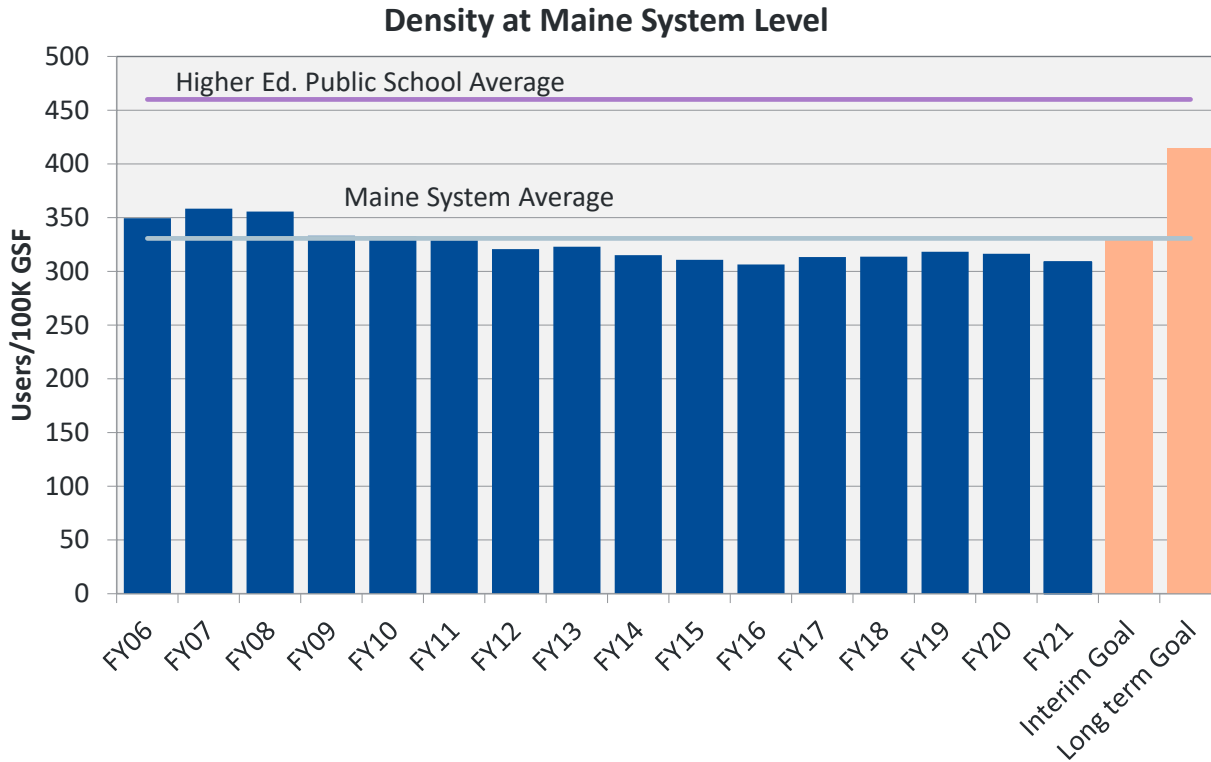
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# Density Across the Maine System Decreases – COVID Impact

Density decreased to 309 users/100K GSF in FY21



Density Affects:



### Staffing Levels

More space will require more staff to clean/maintain space to meet facility standards.



### Material and Supplies

Material and supply demand influenced by how often the space is used.



### Wear and Tear of Facilities

High traffic and space usage result in earlier lifecycle replacement.

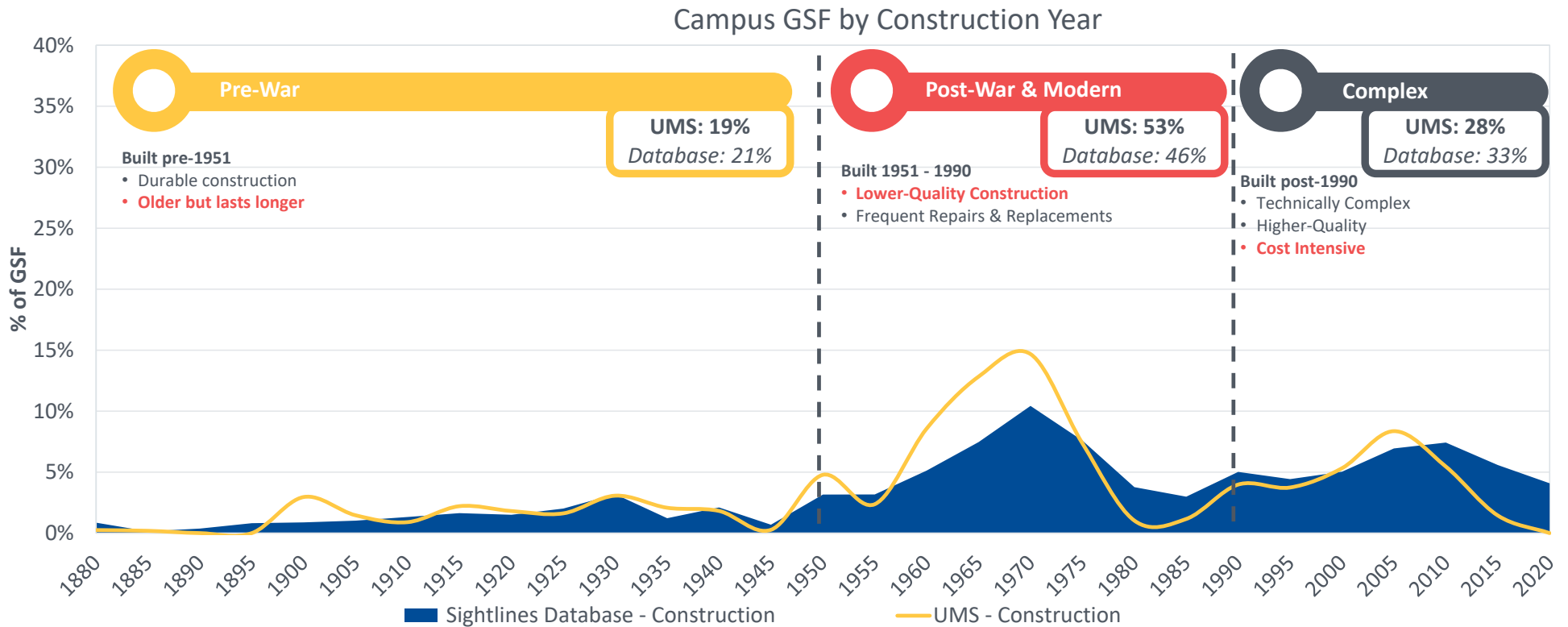
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**Density: Measures number of users per 100,000 GSF**  
Users include all student, faculty and staff FTEs  
Measures campus building usage on a daily basis



# Putting Your Campus Building Age in Context

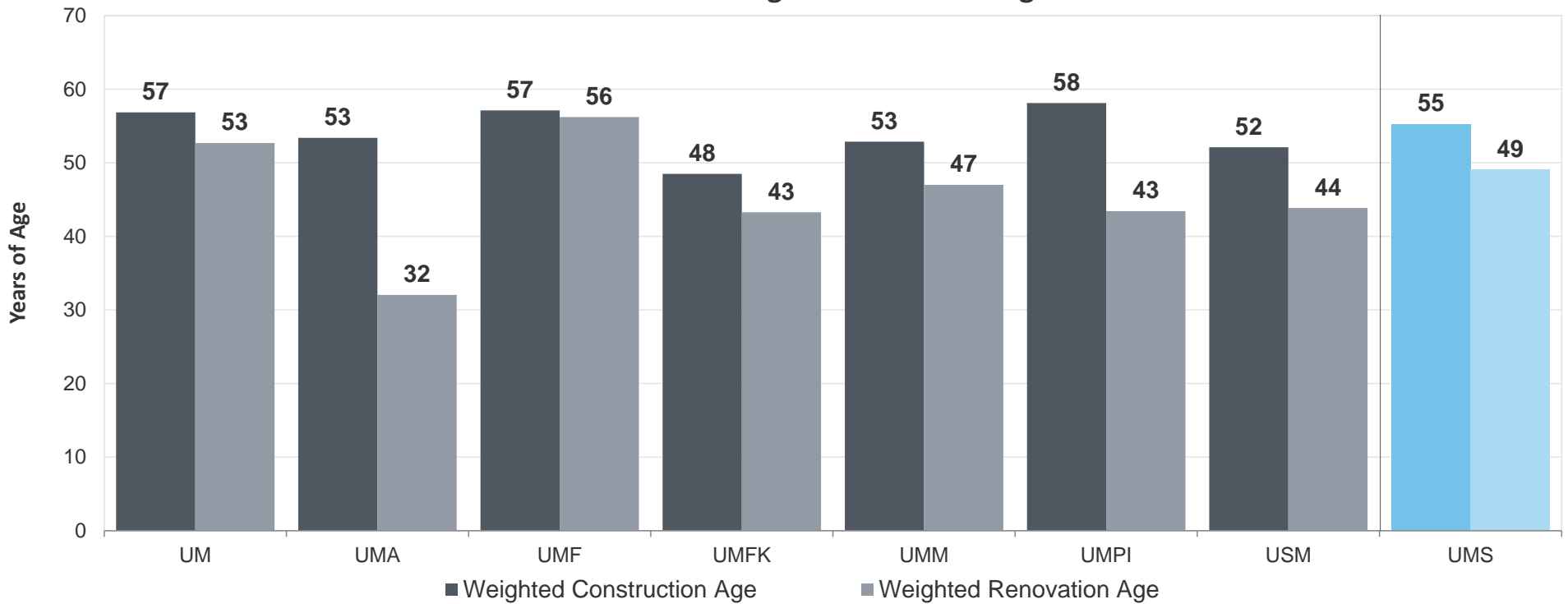
Campus age drives the overall risk profile



# Construction Age vs. Renovation Age by Campus

UMA has offset its age the most through renovations: 21 Years

Construction Age vs Renovation Age



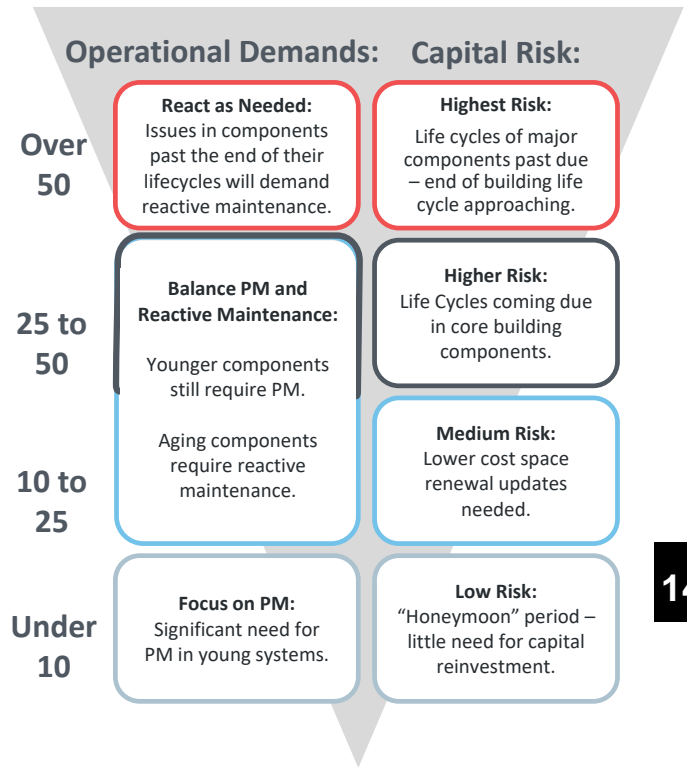
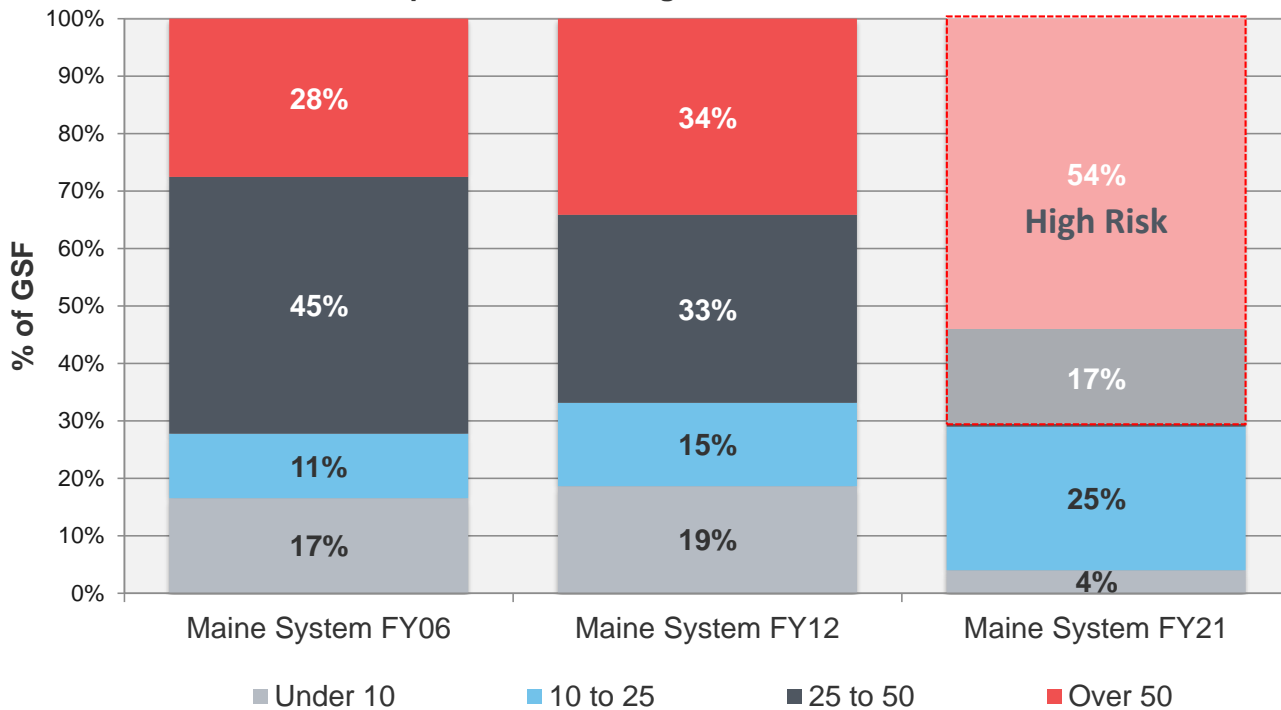
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# 71% of Space Drives Investment Needs at UMS

Buildings over 25 years old require increased capital and operational demands

Campus Renovation Age Distribution Over Time

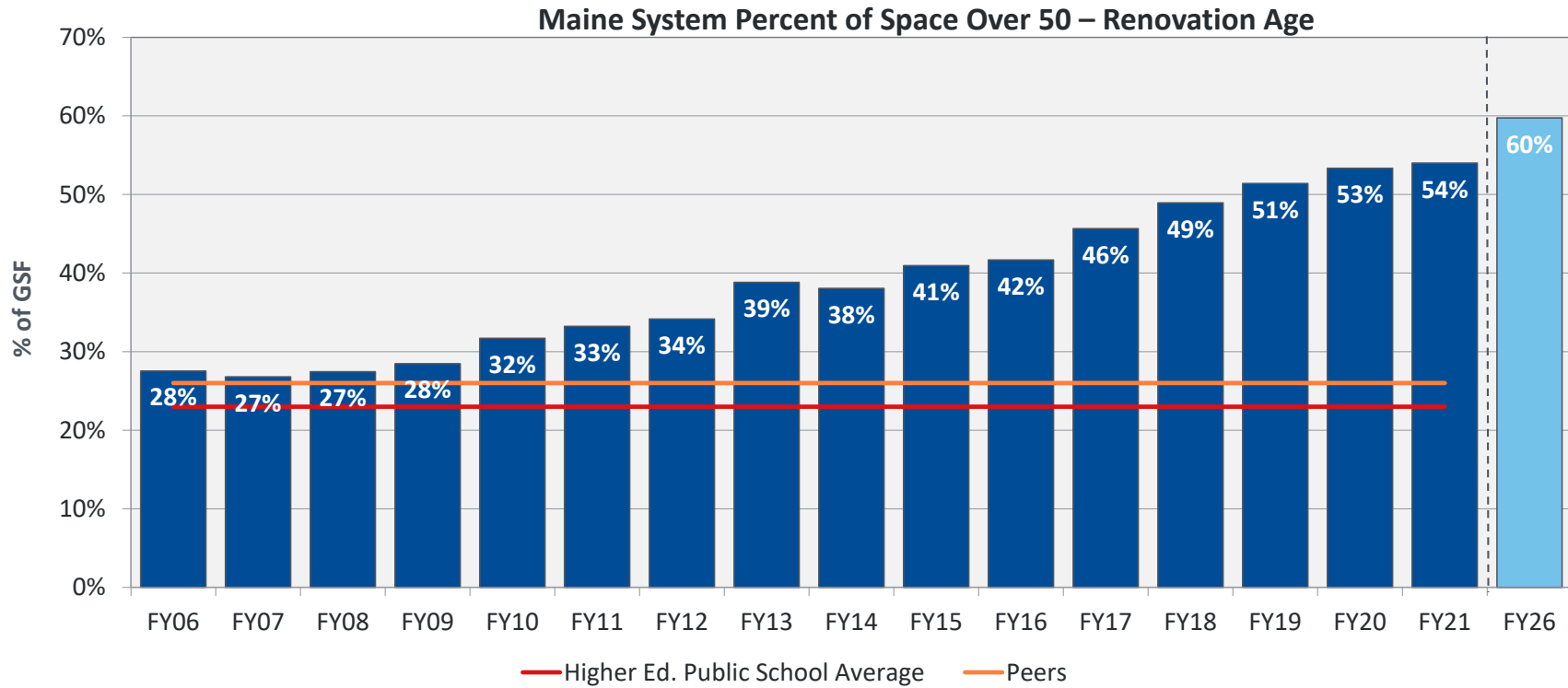


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# 60% of Space Will be Over 50 Years Old by FY26

Plan now for major life cycle replacements in these buildings

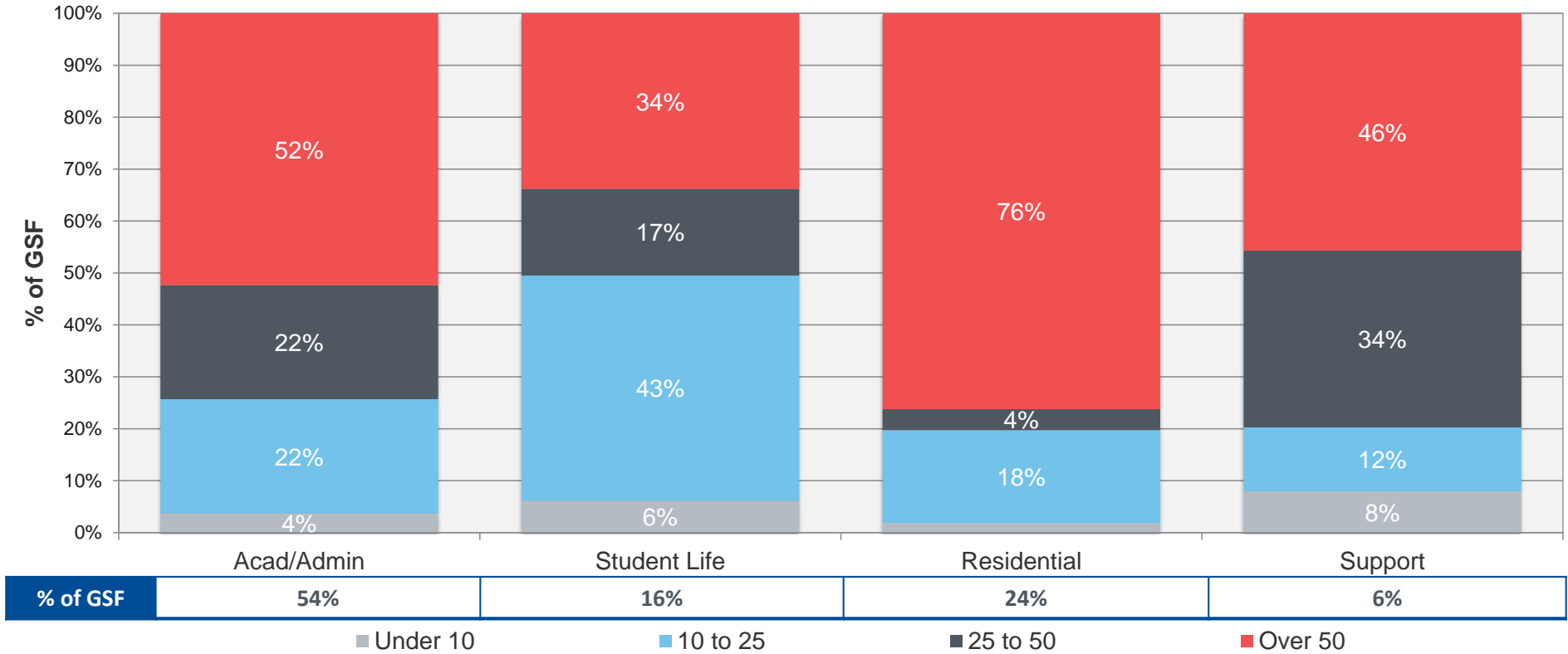


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# Residential Space Has Largest Amount of Space Over 50

FY21 System Renovation Age by Function



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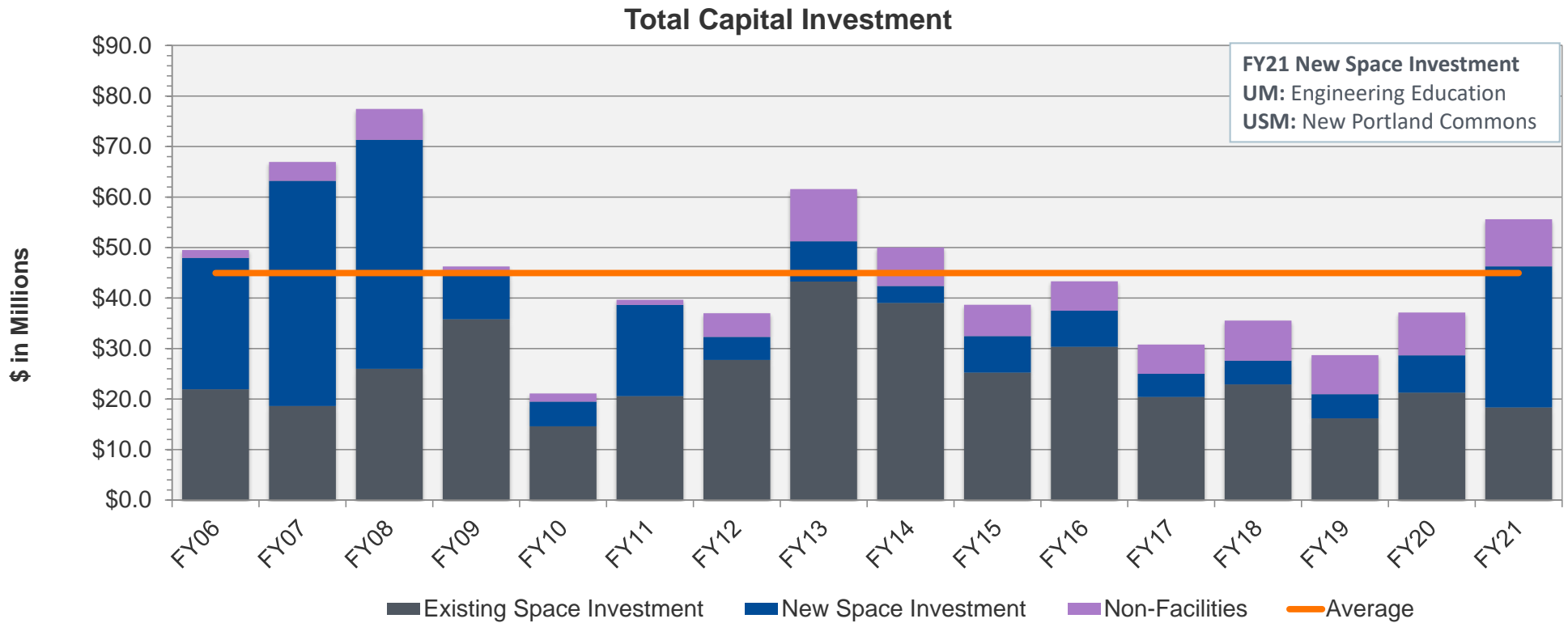


# Asset Value Change

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# Total Capital Investment Increases in FY21

Includes infrastructure investments



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*Examples of Non-Facilities work include: Study/Design fees, IT work, and demolition costs. These are necessary capital costs for Facilities Operations but do not add value/enhance existing buildings.*



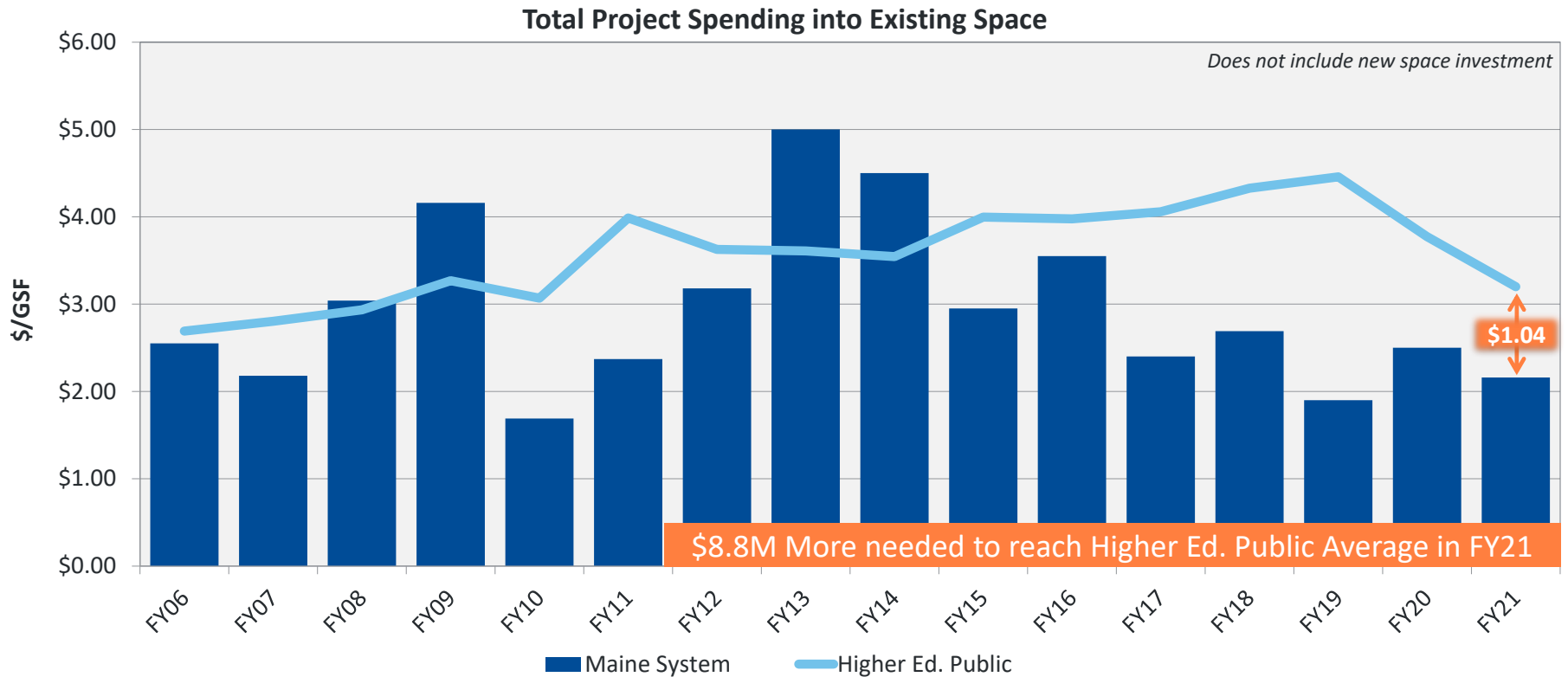
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# Higher Ed Public Institutions See Dramatic Drop in FY21

UMS gap to Public Institutions investment widens \$1.04/GSF in FY21



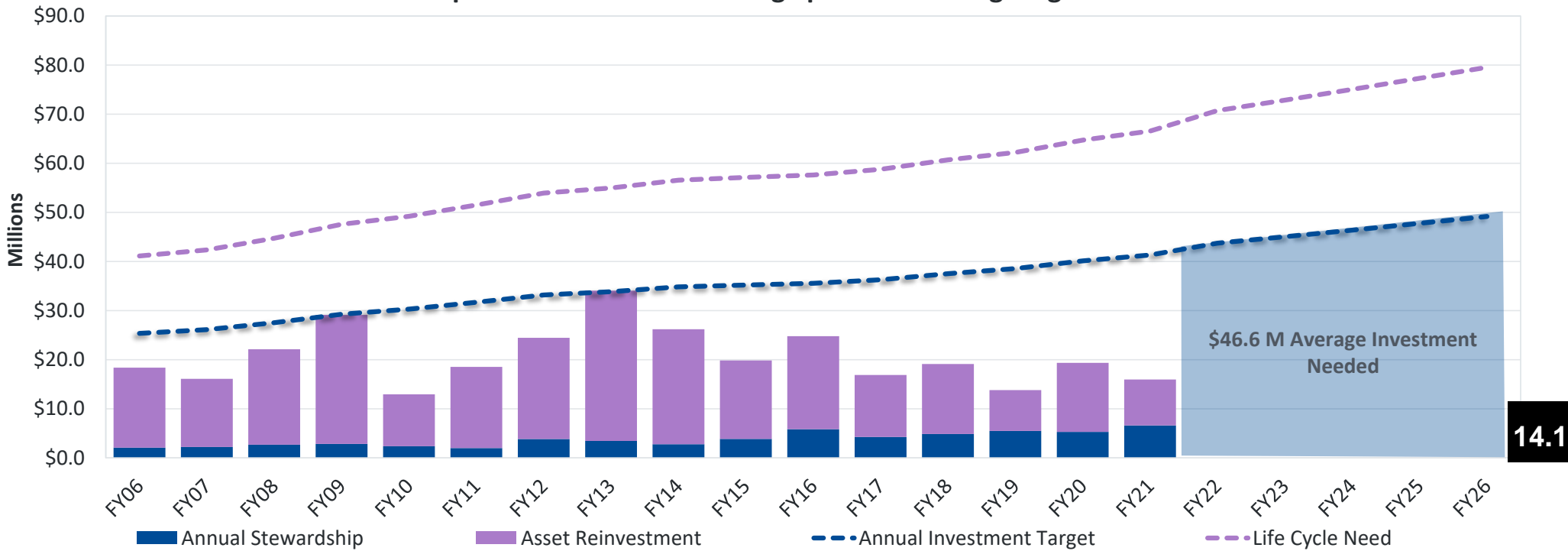
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## Sightlines' Targets Continue to Increase Over Time

Approximately \$45-\$60M needed each year to keep System assets at steady NAV

Capital Investment in Existing Space vs Funding Target Over Time

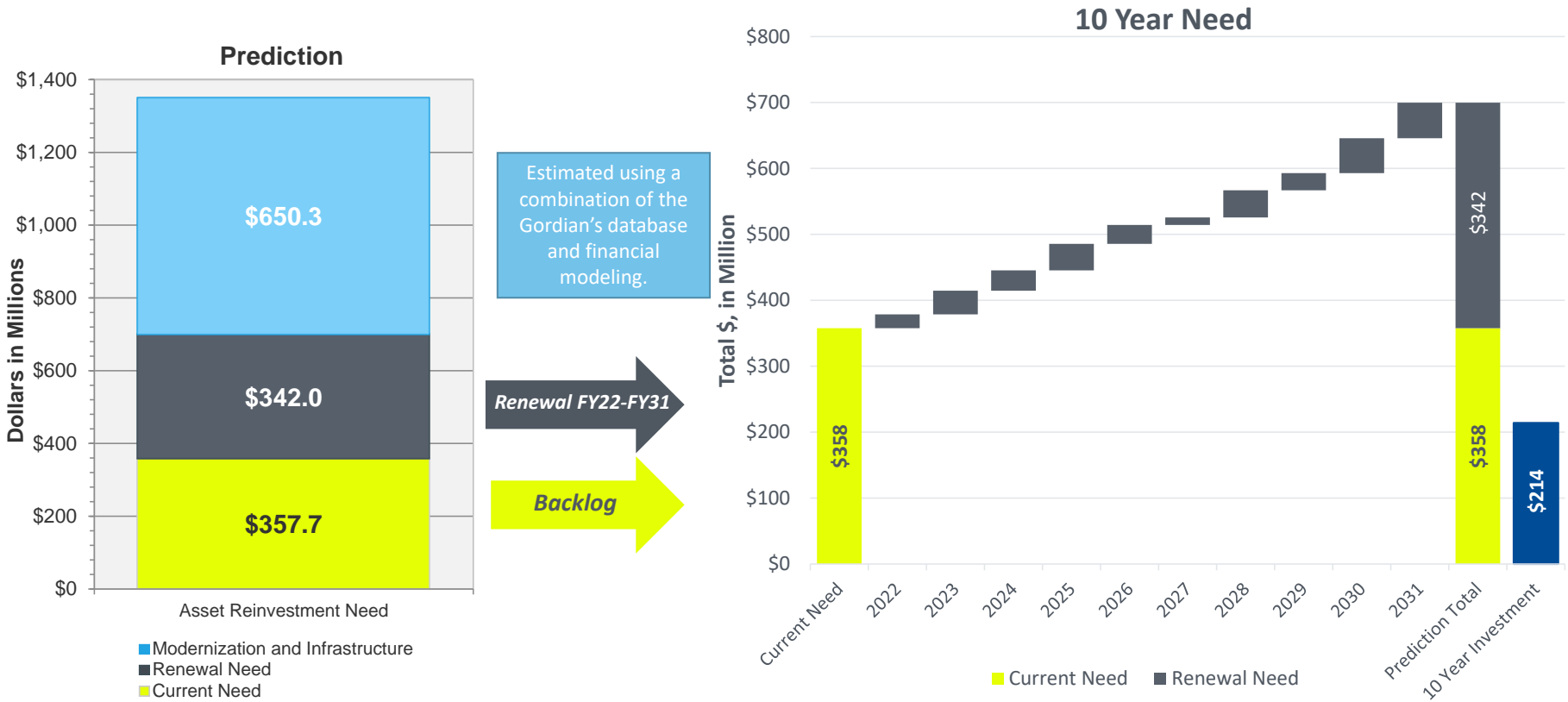


Does not include infrastructure, new space or non-facilities spending

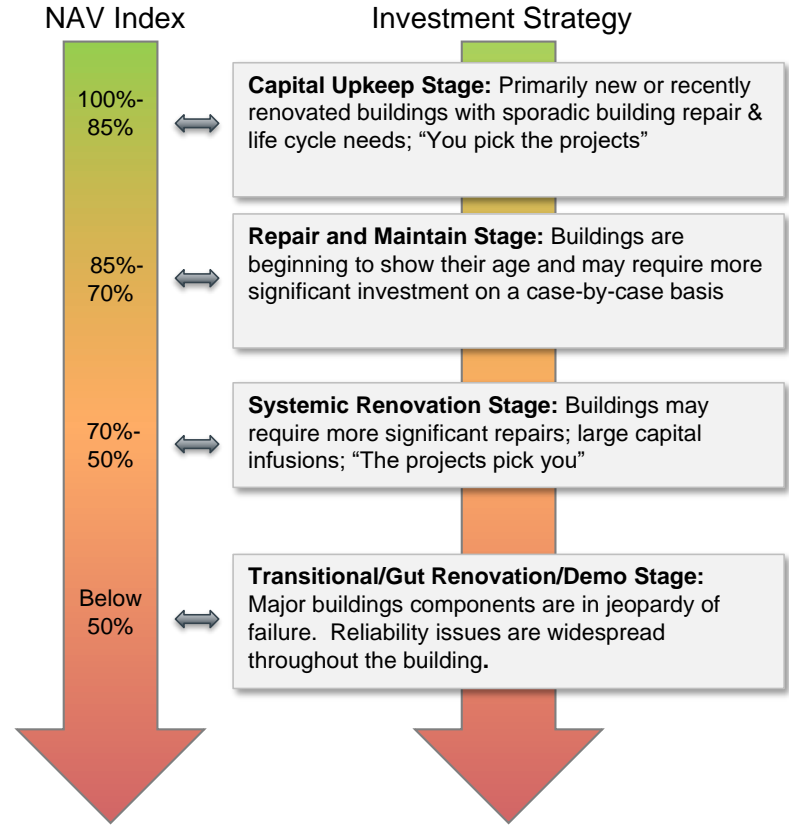
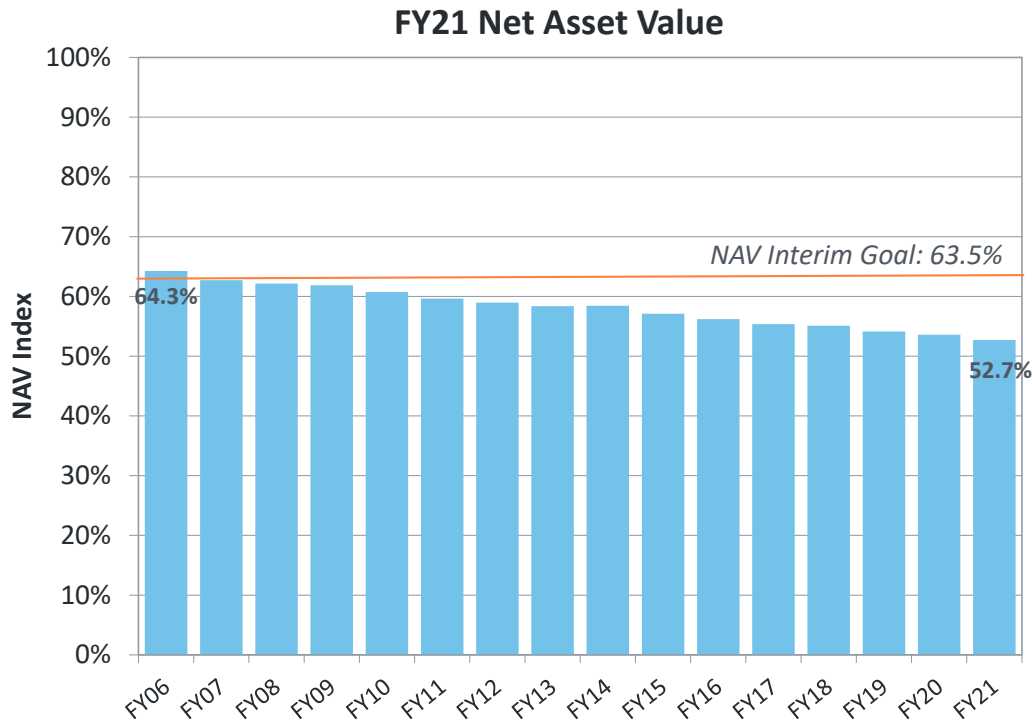


# Planning Investments Over the Next Ten Years

Current Need or Deferred Maintenance accounts for 26% of total need, \$357.7M



# Net Asset Value Over Time; Below KPI Interim Goal



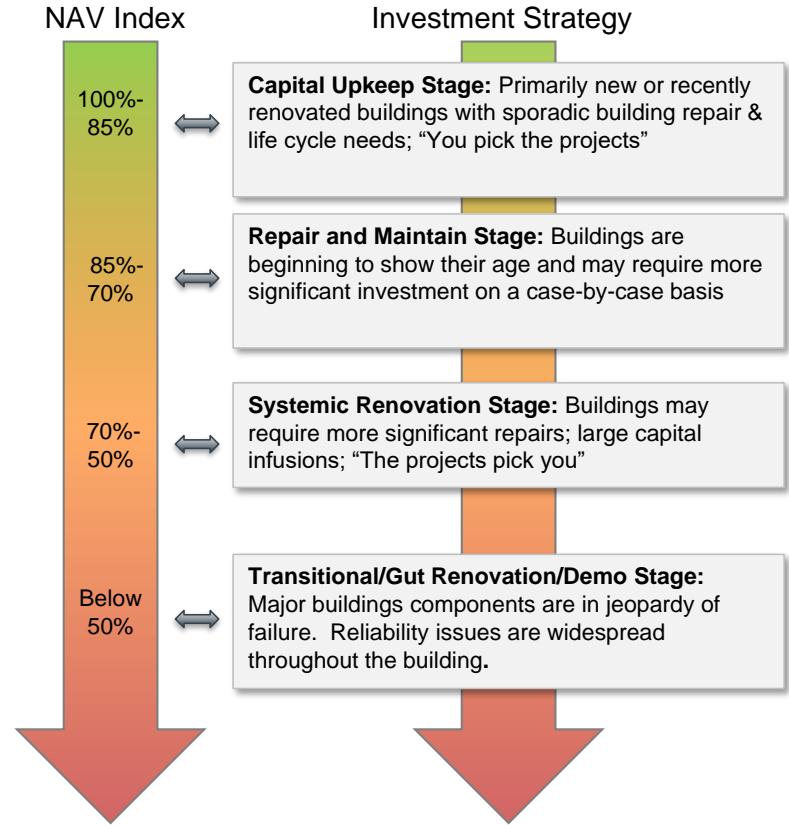
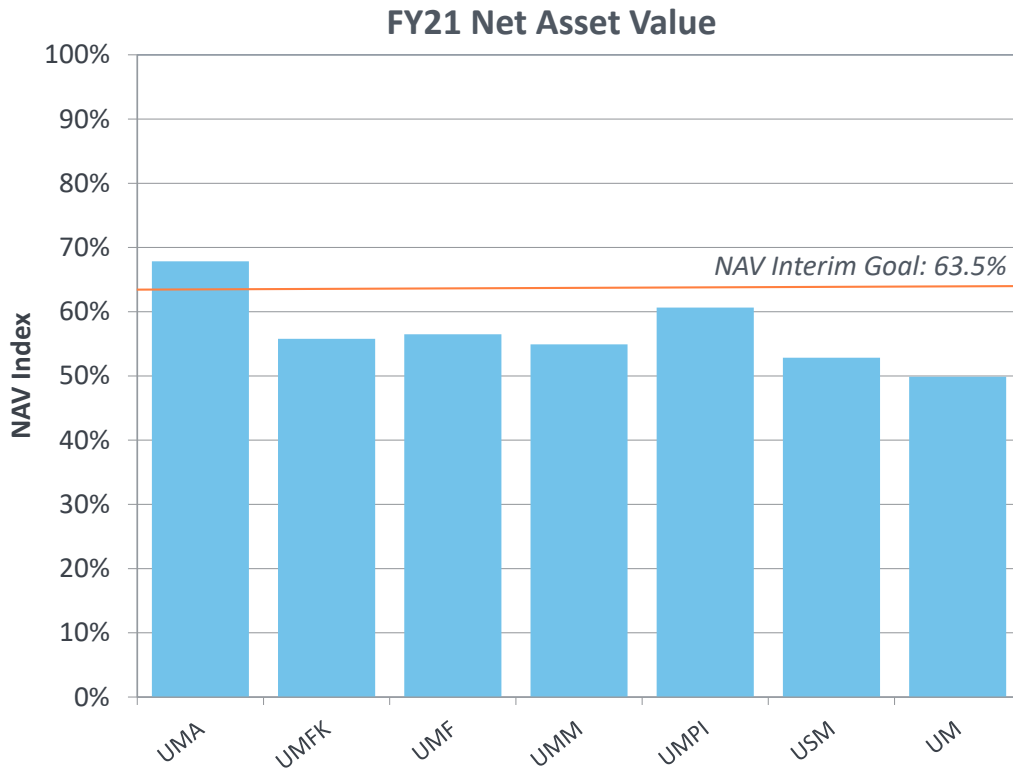
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$$\text{Net Asset Value} = \frac{\text{Replacement Value} - \text{Backlog}}{\text{Replacement Value}}$$



# FY21 Net Asset Value By Campus



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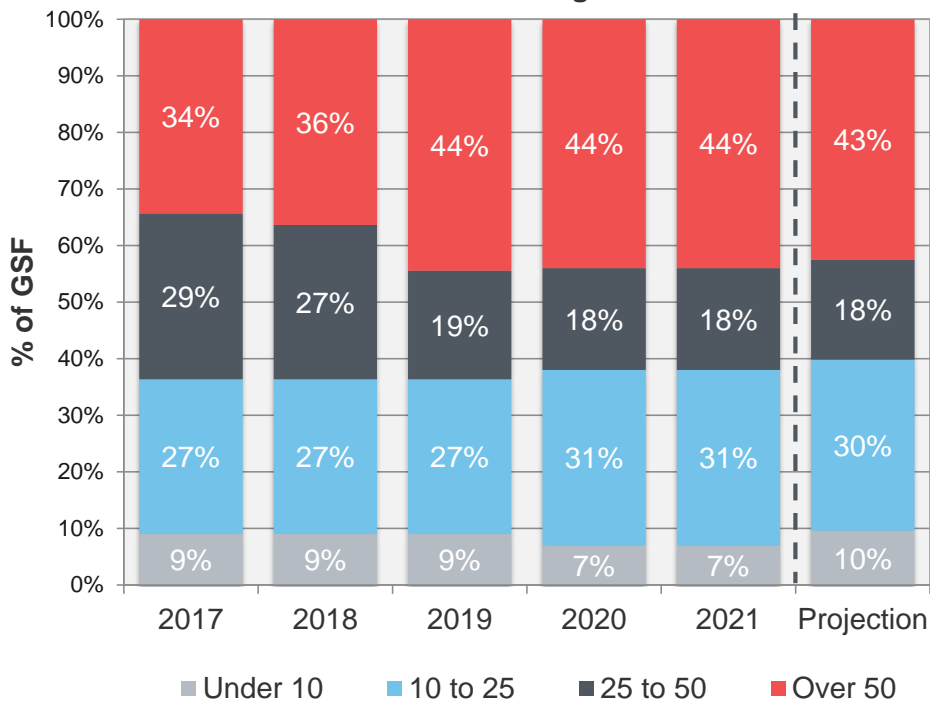
$$\text{Net Asset Value} = \frac{\text{Replacement Value} - \text{Backlog}}{\text{Replacement Value}}$$



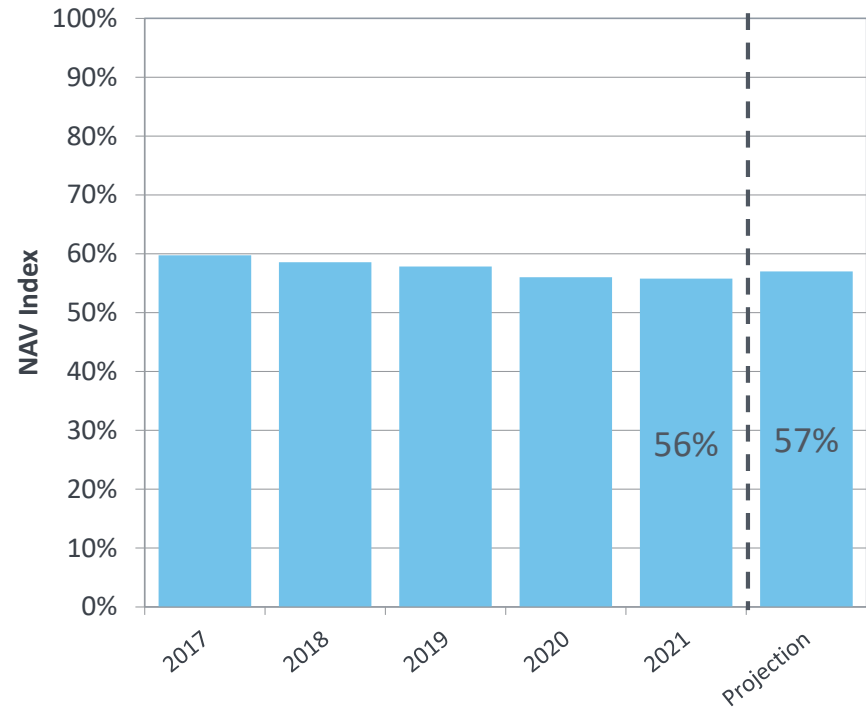
# Case Study: Fort Kent Enrollment and Advancement Center

Removing older spaces in addition to the new facility improves NAV and renovation age

Renovation Age



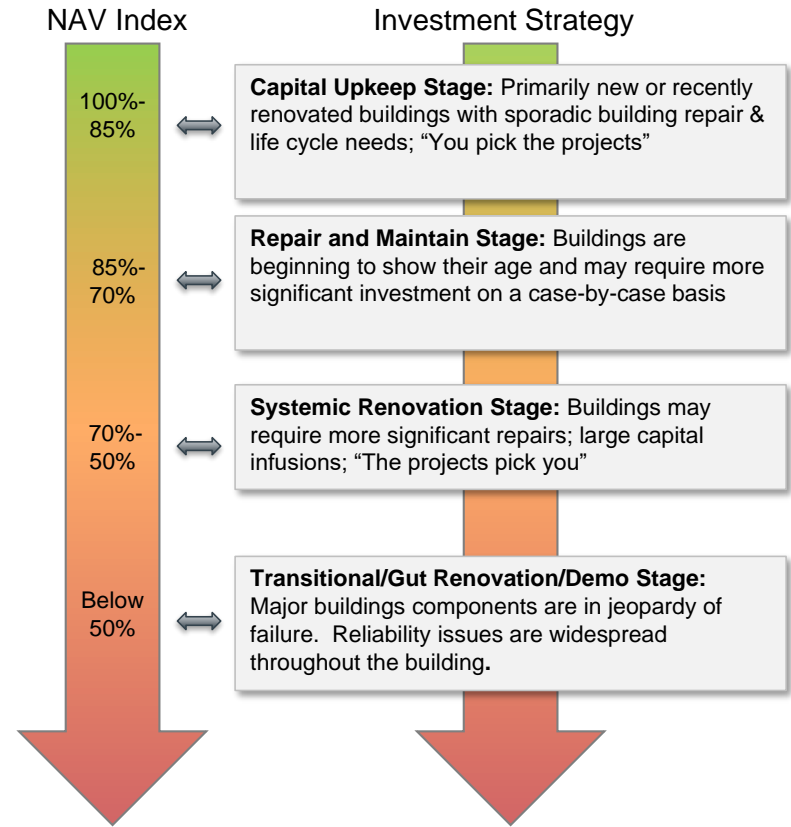
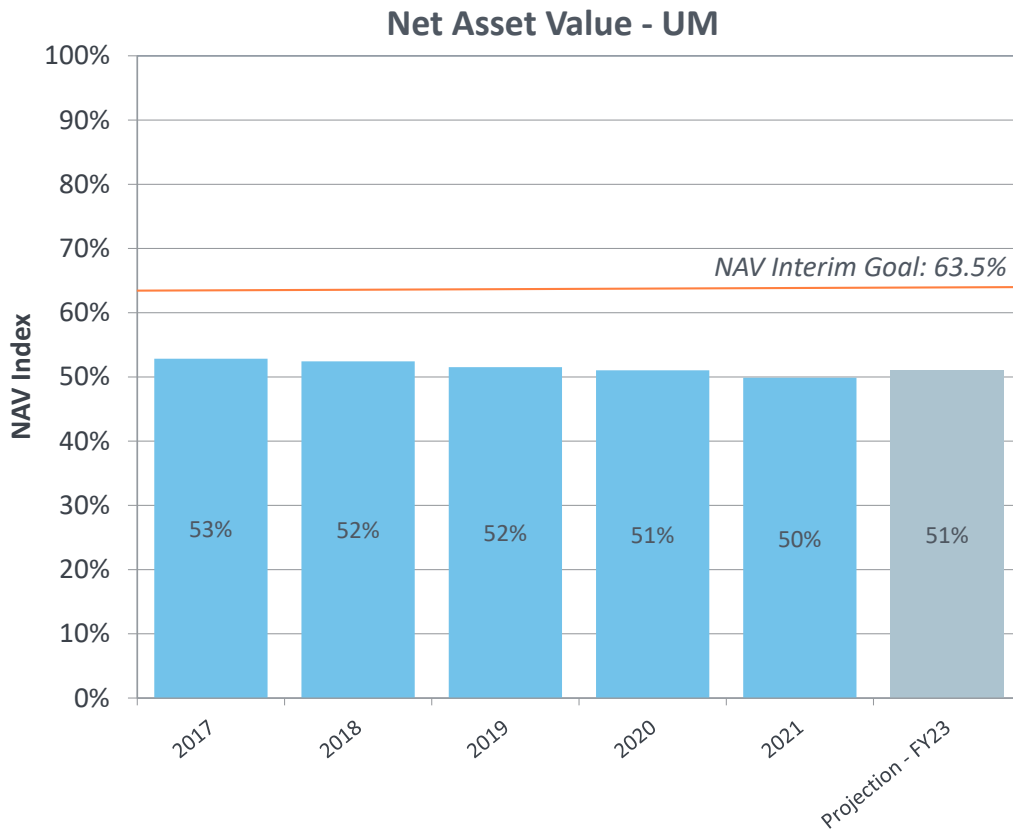
Net Asset Value



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# Case Study: New Space Projected to Increase NAV @ UM

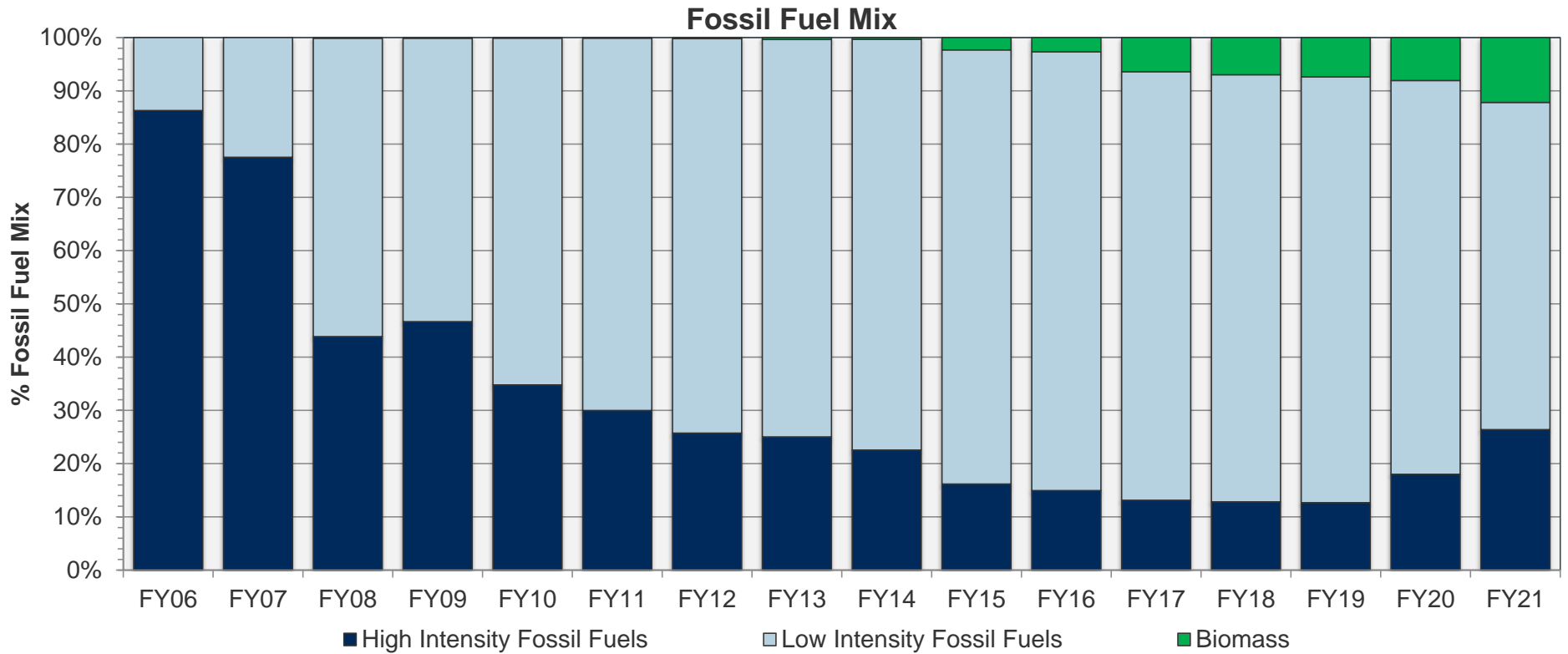


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# High Intensity Fossil Increases as Low Intensity Decreases

UM need for oil drives up high intensity fossil usage



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\*High intensity fuels include oil #2 and oil #6  
 \*\*Low intensity fuels include natural gas and propane

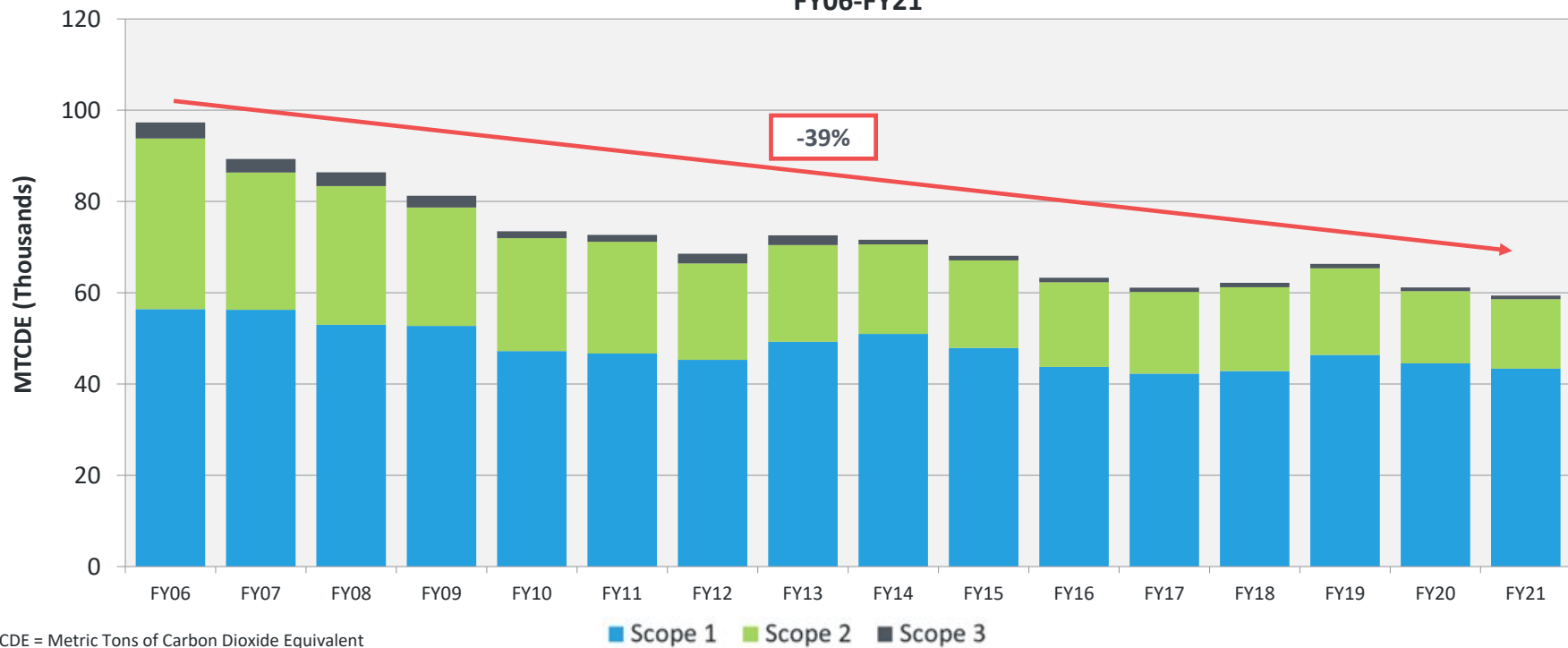




# Fuel Mix and Consumption Drive Emission Rates

Total gross emissions have decreased 39% since FY06

University of Maine System Total Gross Emissions  
FY06-FY21



MTCDE = Metric Tons of Carbon Dioxide Equivalent

14.1



# Concluding Comments

14.1

# Key Takeaways

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## SUCCESSES

- Campus footprints are stable. New space offset by older GSF taken offline. Strategic planning includes effectively supporting new space. Not “making the problems greater.”
- Continue to incentivize space removal. To see progress in this area, larger buildings will need to be considered. Campus constituents need to understand short term inconveniences will achieve longer term improvements.
- The work control center and AiM data provides the opportunity to pinpoint where operational resources are being dedicated. This information can be used to focus capital investment and ultimately free up operating dollars.

## CONTINUED CHALLENGES

- Campus is aging. UMS will need \$45-\$60M each year to slow the aging process and mitigate deferred maintenance. How can UMS incrementally grow investment to these levels for existing space while supporting the record levels of investment happening over the coming years?
- To reverse the aging process and begin to increase Net Asset Value within the System inventory, campuses can:
  1. Remove space
  2. Utilize renovation through replacement strategy
  3. Add new construction GSF
- Space/Student FTE remains higher to peers. Removing space from the inventory will improve density and enhance utilization of space at the campuses. To date only a small portion of overall GSF has been removed.

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# Questions and Comments

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# The University of Maine System FY21 Return on Physical Assets Final Presentation

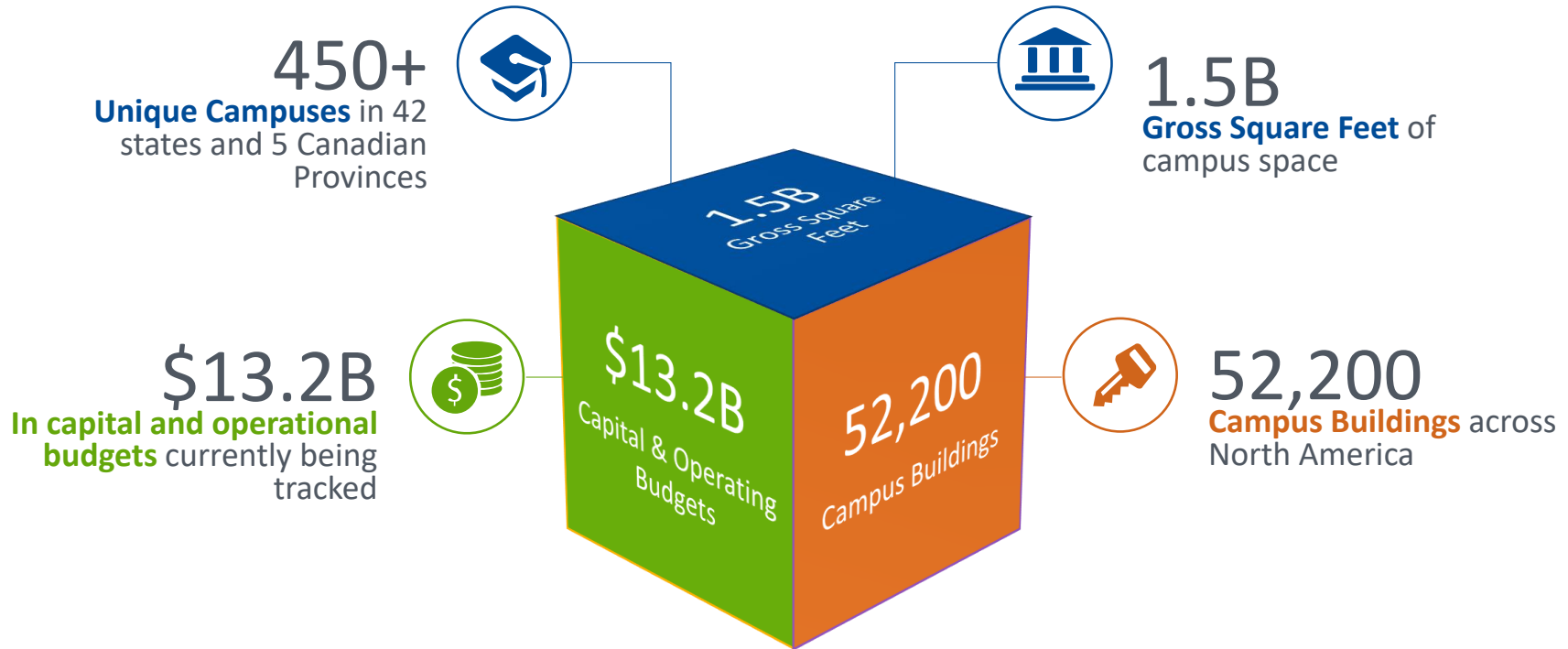
March 2022

University of the Sciences in Philadelphia  
University of Toledo  
University of Vermont  
University of Washington  
University of West Florida  
University of Wisconsin - Madison  
Vanderbilt University  
Virginia Commonwealth University  
Wake Forest University  
Washburn University  
Washington State University  
Washington State University - Tri-Cities Campus  
Washington State University - Vancouver  
Washington University in St. Louis  
Wayne State University  
Wellesley College  
Wesleyan University  
West Chester University  
West Virginia Health Science Center  
West Virginia University  
Western Oregon University  
Westfield State University  
Widener University  
Williams College  
Worcester Polytechnic Institute

14.2

# Gordian and Sightlines

Owners of the largest verified facilities database in higher education

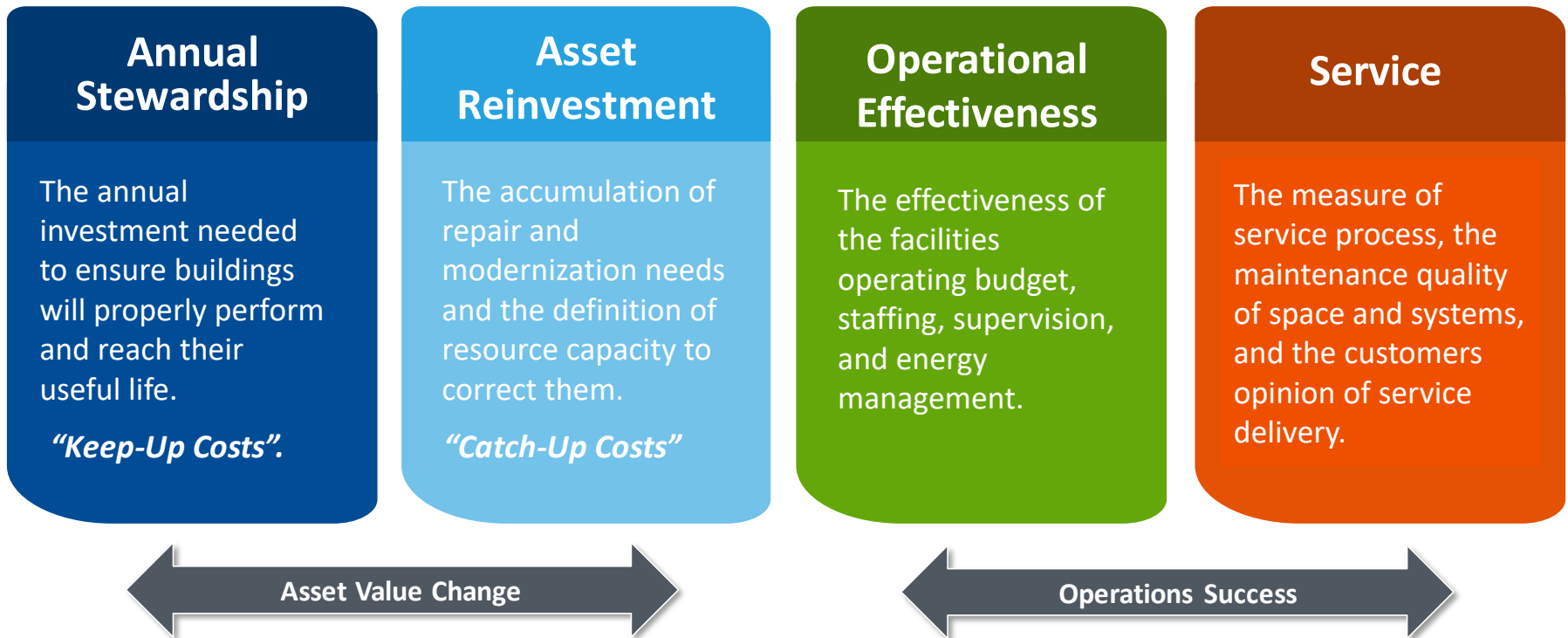


14.2

Sightlines members serve **over 20%** of US College Enrollment

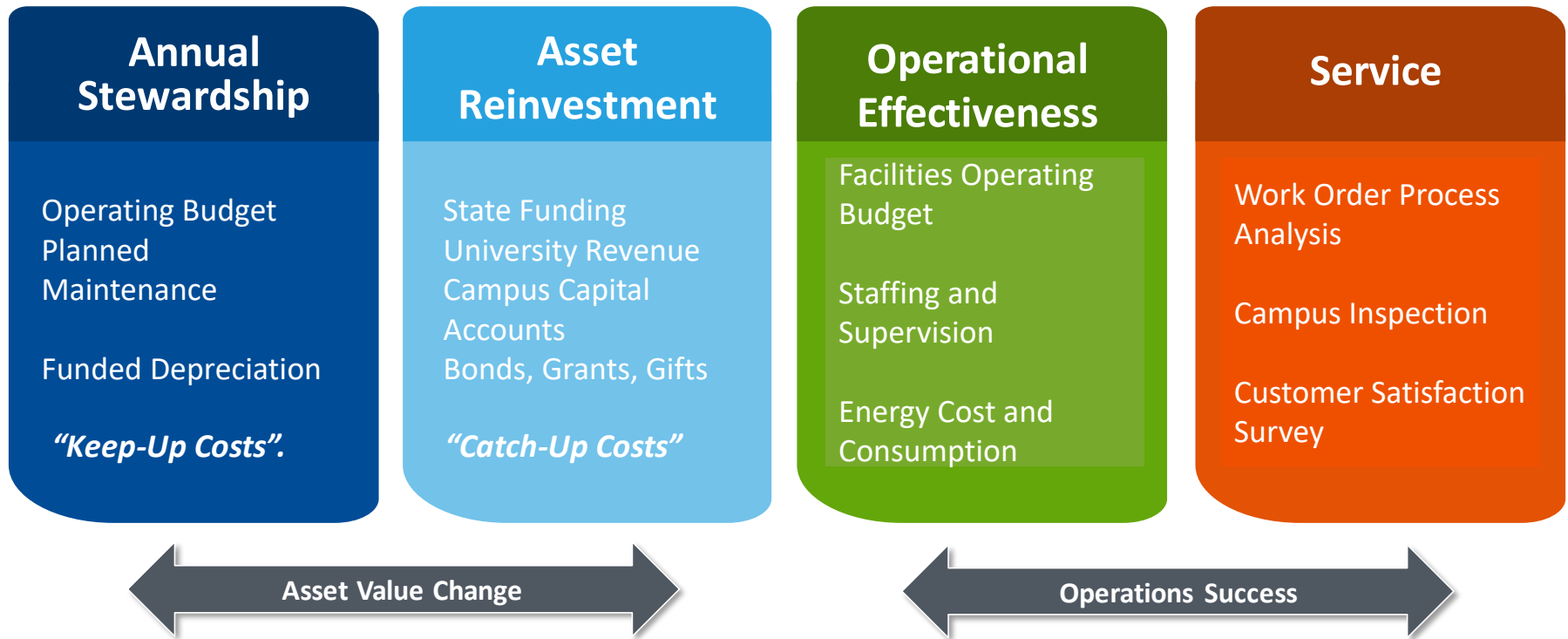


## Vocabulary for Return on Physical Assets (ROPA)



14.2

## Vocabulary for Return on Physical Assets (ROPA)

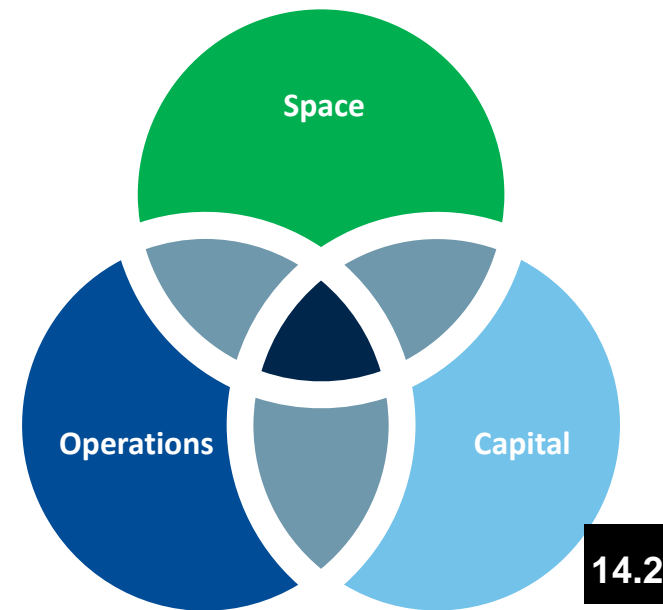


14.2



# Integrated Campus Stewardship

- FY2021 GSF remains steady; campus populations decrease. Density of system is below interim goal.
- Space continues to age. Space over 50 years old increases; space under 10 years old shifts into higher age brackets. Residential space is the oldest subset of space on campuses.
- The highest \$/GSF needs exist in the oldest buildings on campus
- Capital investment, despite increasing in FY21, is not able to slow the aging process of System assets in existing spaces; focus shifts toward new space.
- AIM data provides areas for opportunity in planned maintenance and project selection.



*Throughout the presentation UMS will be compared to the Gordian Public Higher Ed. Database Average for FY21. This subset of the database includes institutions like the University of Massachusetts, University of New Hampshire, University of Iowa, University of New Mexico and University of Connecticut.*

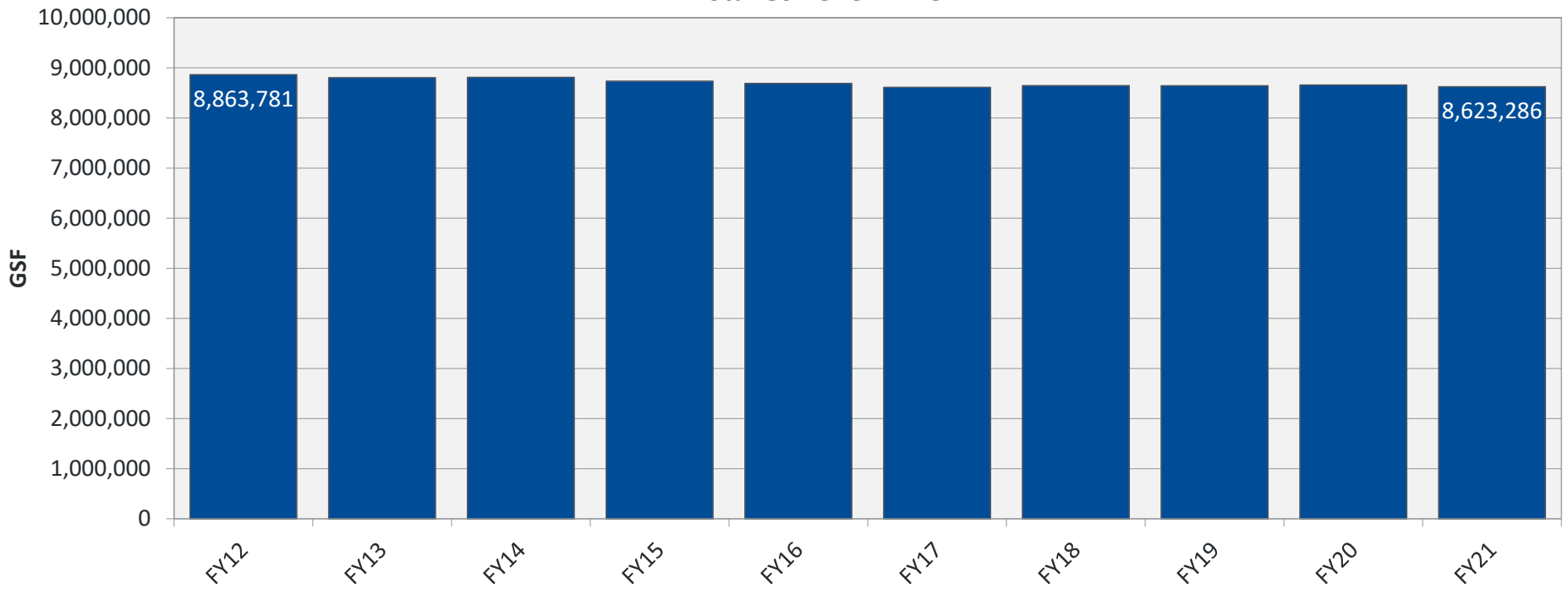


# Space Profile

14.2

# UMS GSF

Total GSF Over Time



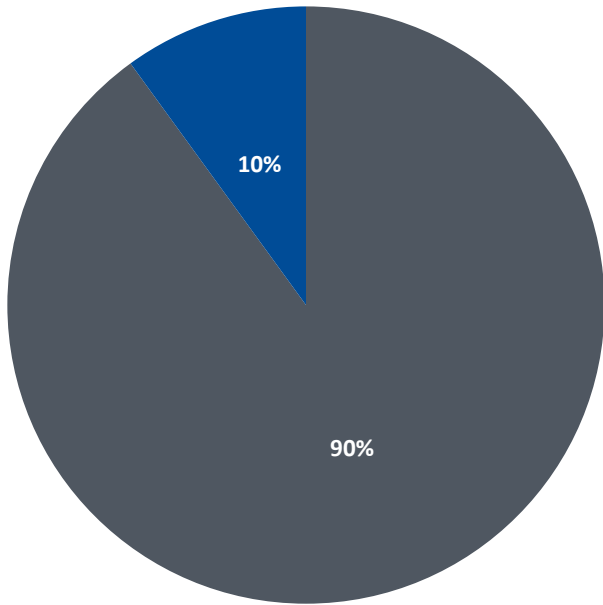
14.2



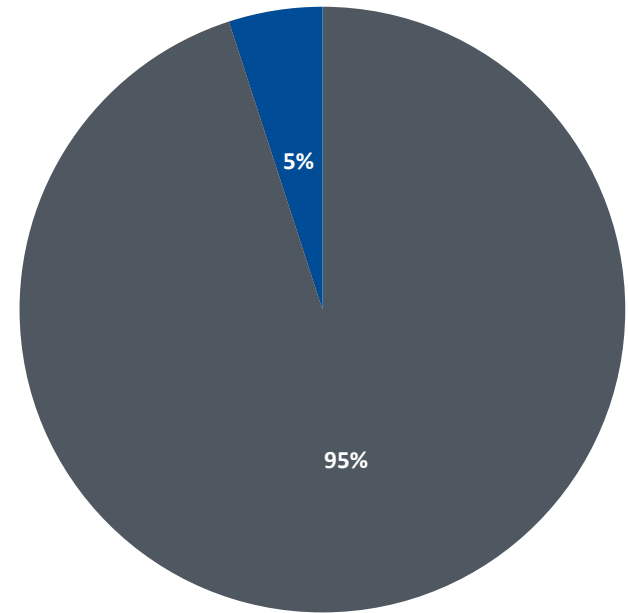
# Impact of Building Demolitions

Average size of buildings taken offline less than 10,000 GSF

FY12- FY21 Count of Buildings



FY12-21 Total GSF

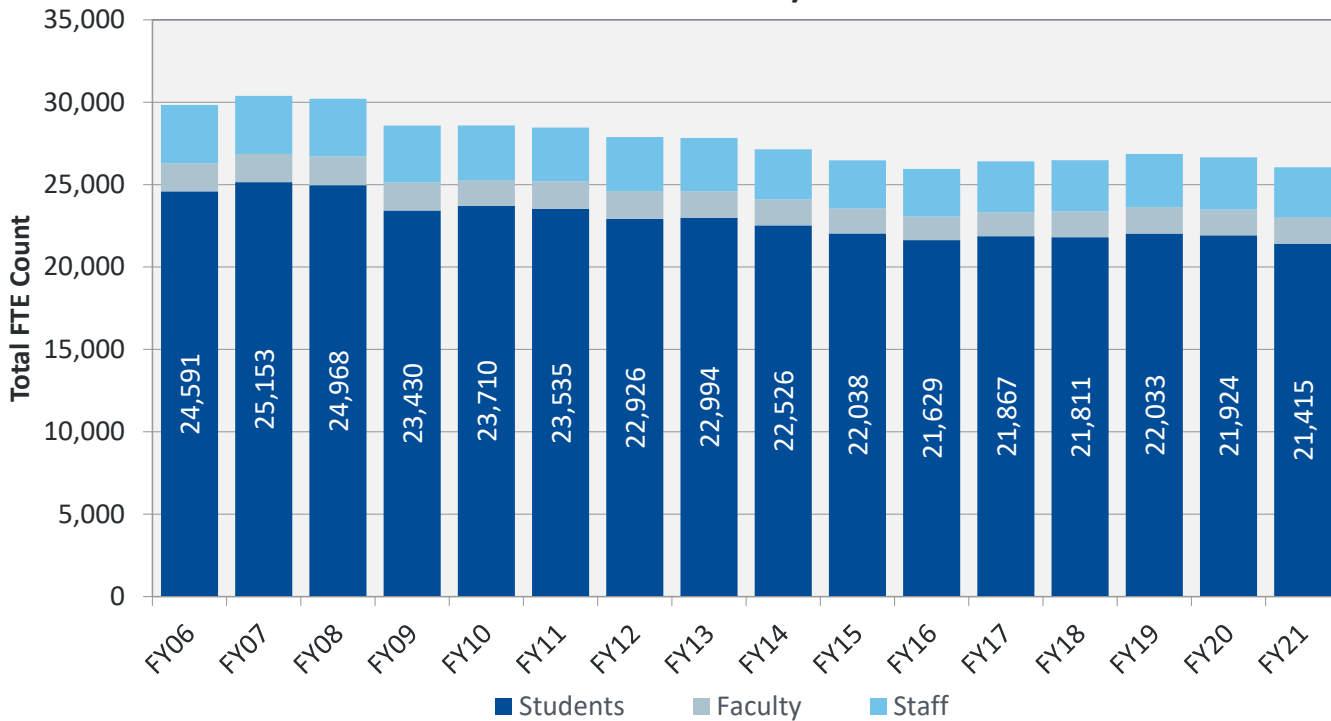


■ Buildings Online  
■ Buildings Taken Offline

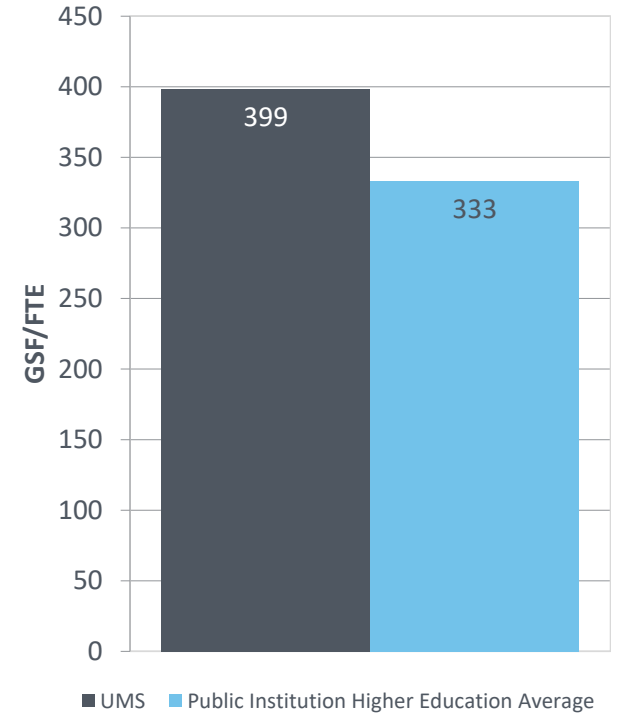
14.2

# FY21 Student Enrollment Sees Downward Trend

Total FTE's in Maine System



Total Space per Student FTE



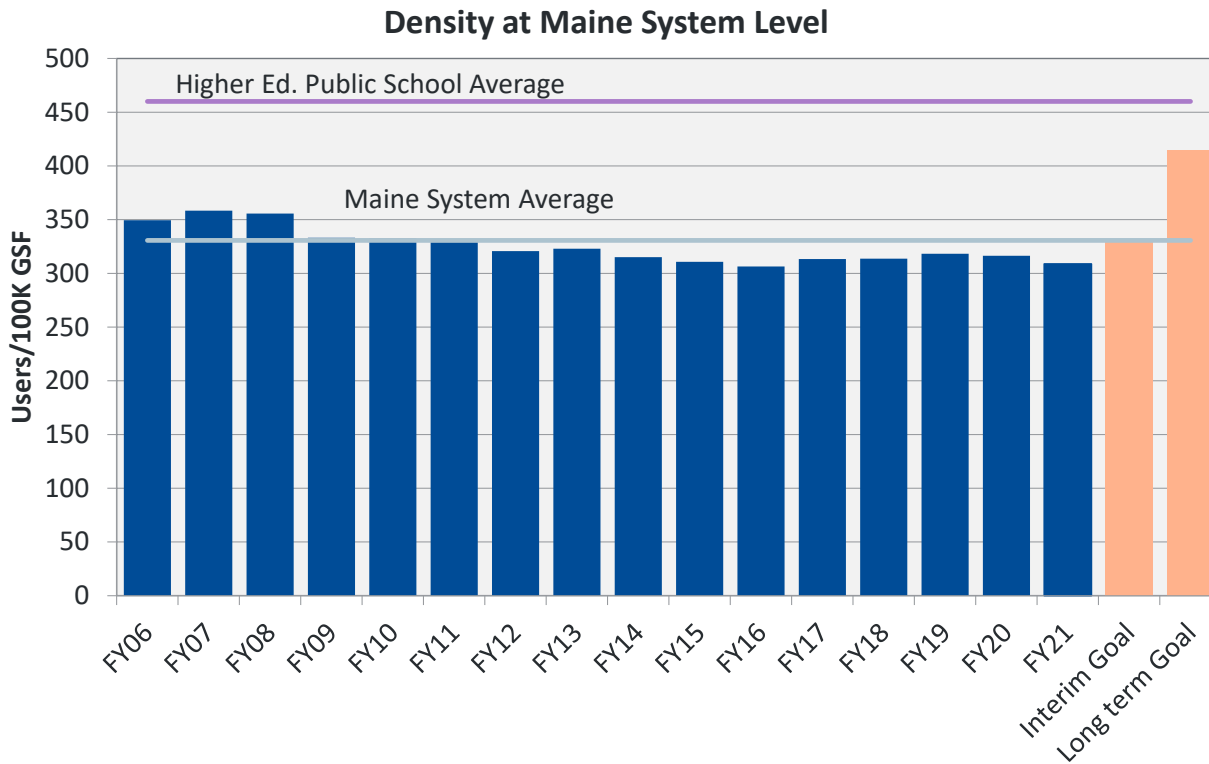
14.2



Does not take into account reductions in occupancy due to remote teaching, learning and work in the spring and summer.

# Density Across the Maine System Decreases – COVID Impact

Density decreased to 309 users/100K GSF in FY21



Density Affects:



### Staffing Levels

More space will require more staff to clean/maintain space to meet facility standards.



### Material and Supplies

Material and supply demand influenced by how often the space is used.



### Wear and Tear of Facilities

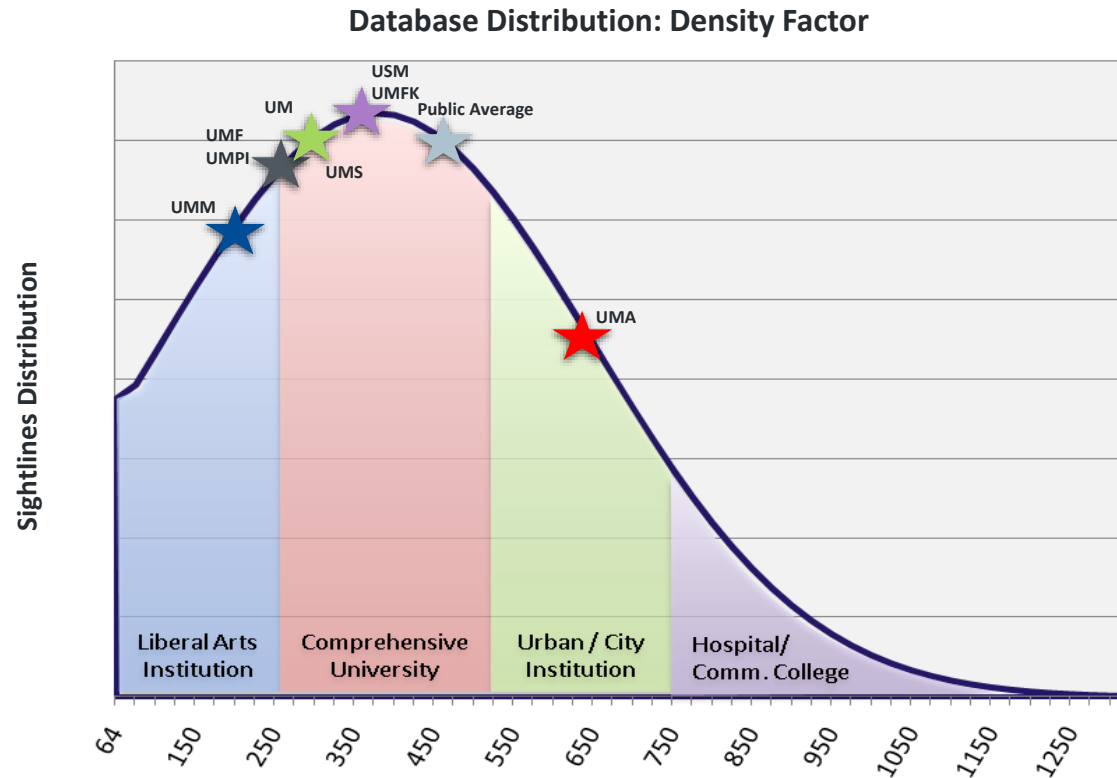
High traffic and space usage result in earlier lifecycle replacement.

14.2

**Density: Measures number of users per 100,000 GSF**  
Users include all student, faculty and staff FTEs  
Measures campus building usage on a daily basis



# Density Across the System



## Density Affects:



### Staffing Levels

More space will require more staff to clean/maintain space to meet facility standards.



### Material and Supplies

Material and supply demand influenced by how often the space is used.



### Wear and Tear of Facilities

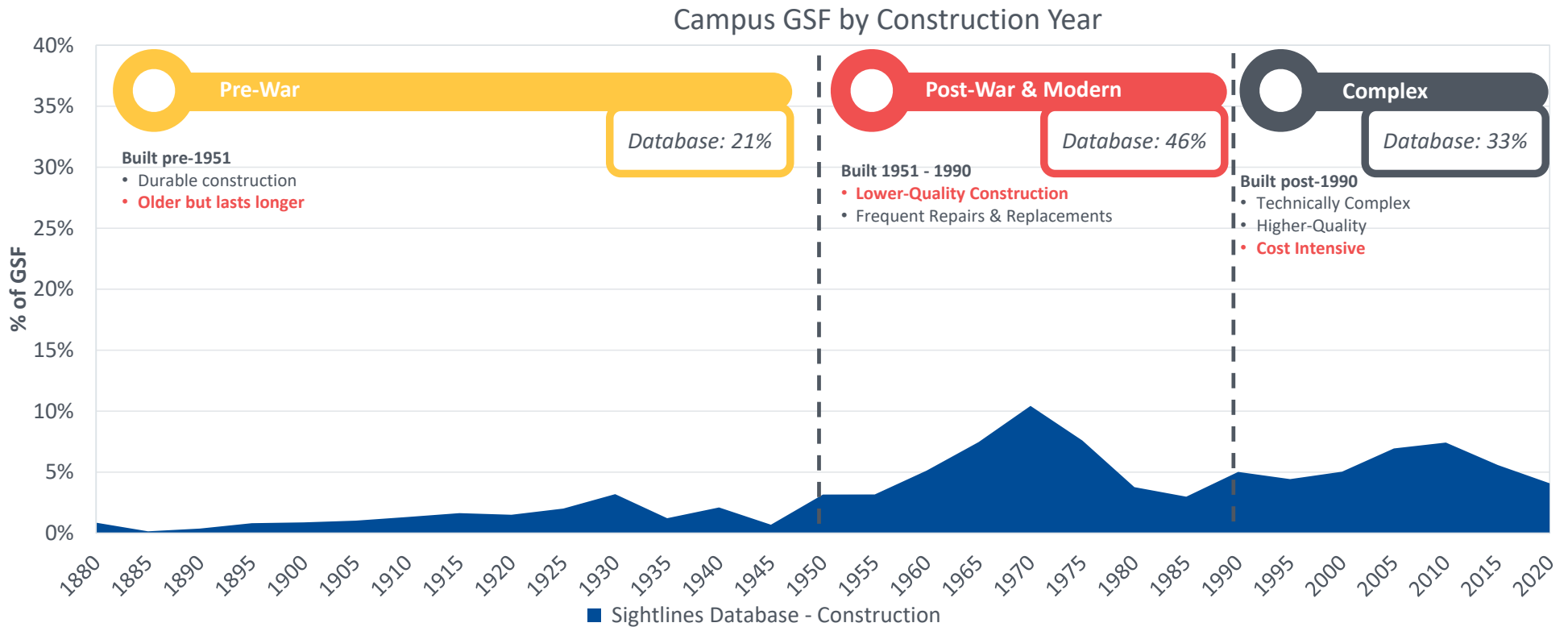
High traffic and space usage result in sooner lifecycle replacement.

**14.2**

**Density: Measures number of users per 100,000 GSF**  
 Users include all student, faculty and staff FTEs  
 Measures campus building usage on a daily basis

# Putting Your Campus Building Age in Context

Campus age drives the overall risk profile

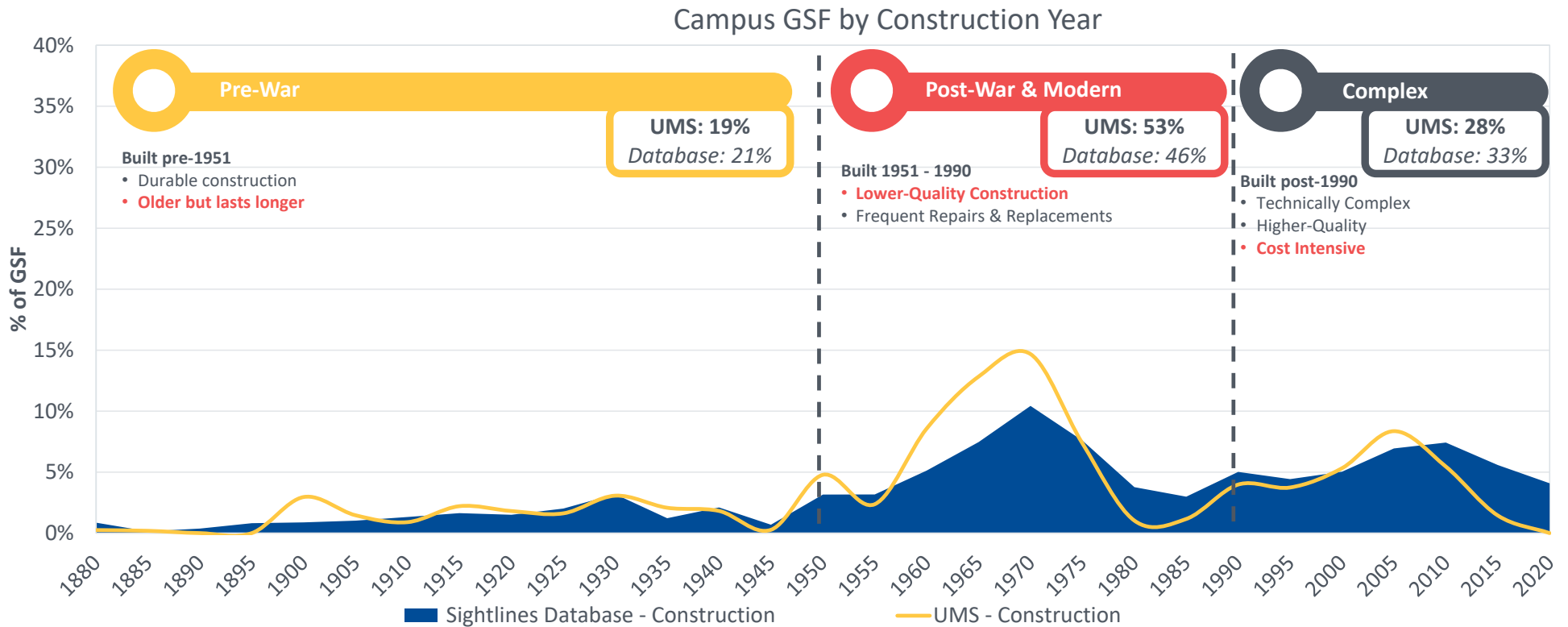


14.2



# Putting Your Campus Building Age in Context

Campus age drives the overall risk profile



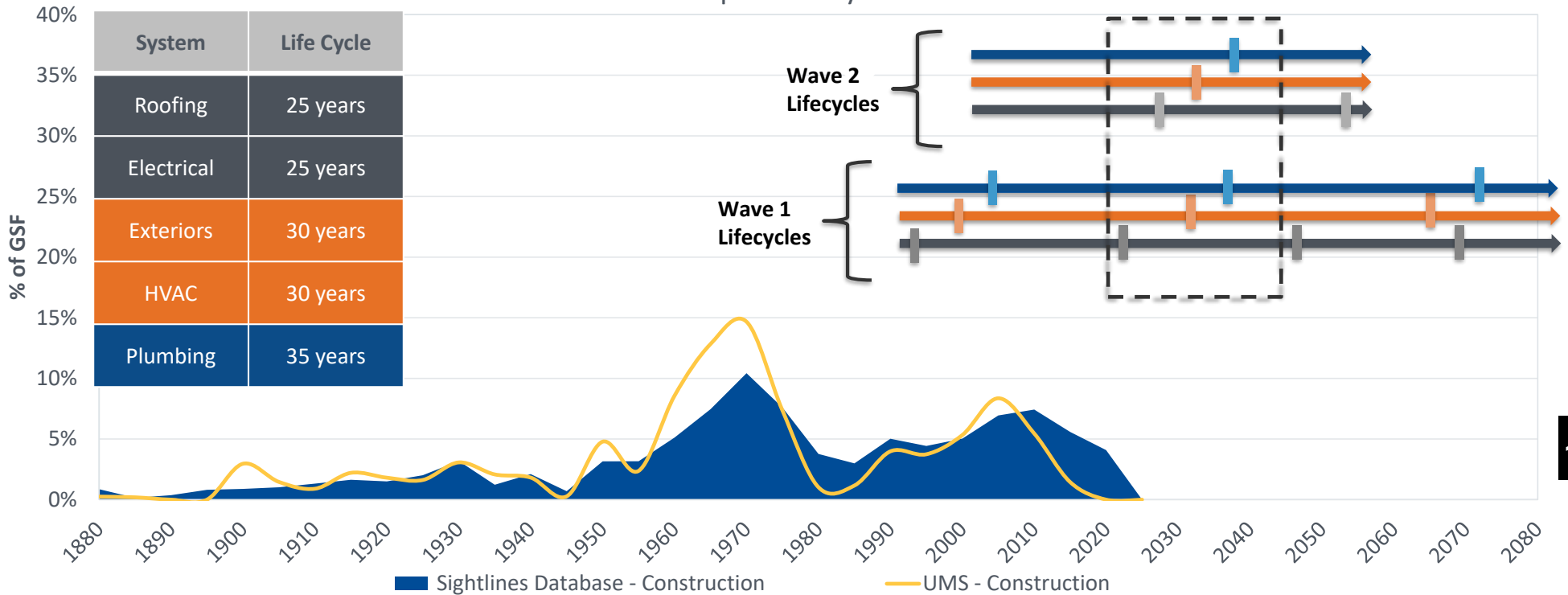
14.2



# Putting Your Campus Building Age in Context

Life cycle models forecasts waves of major building systems coming due in tandem

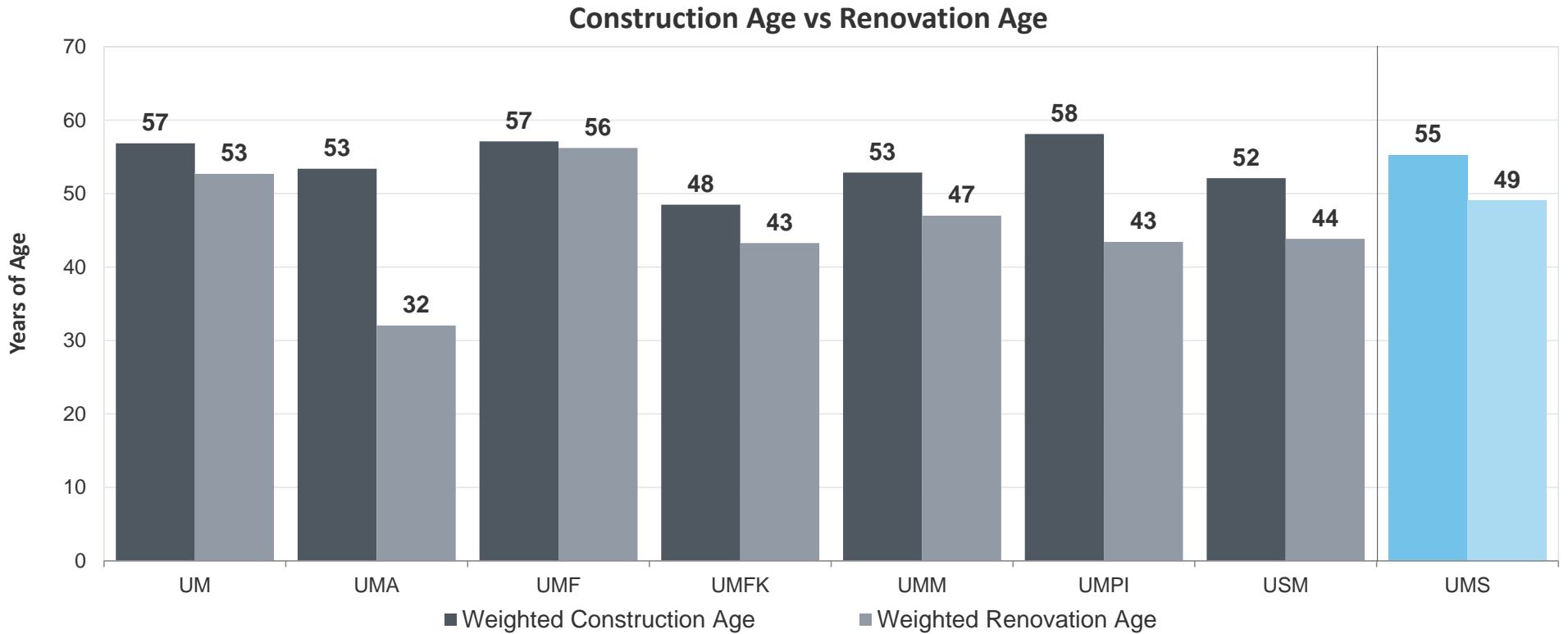
Campus GSF by Construction Year



14.2

# Construction Age vs. Renovation Age by Campus

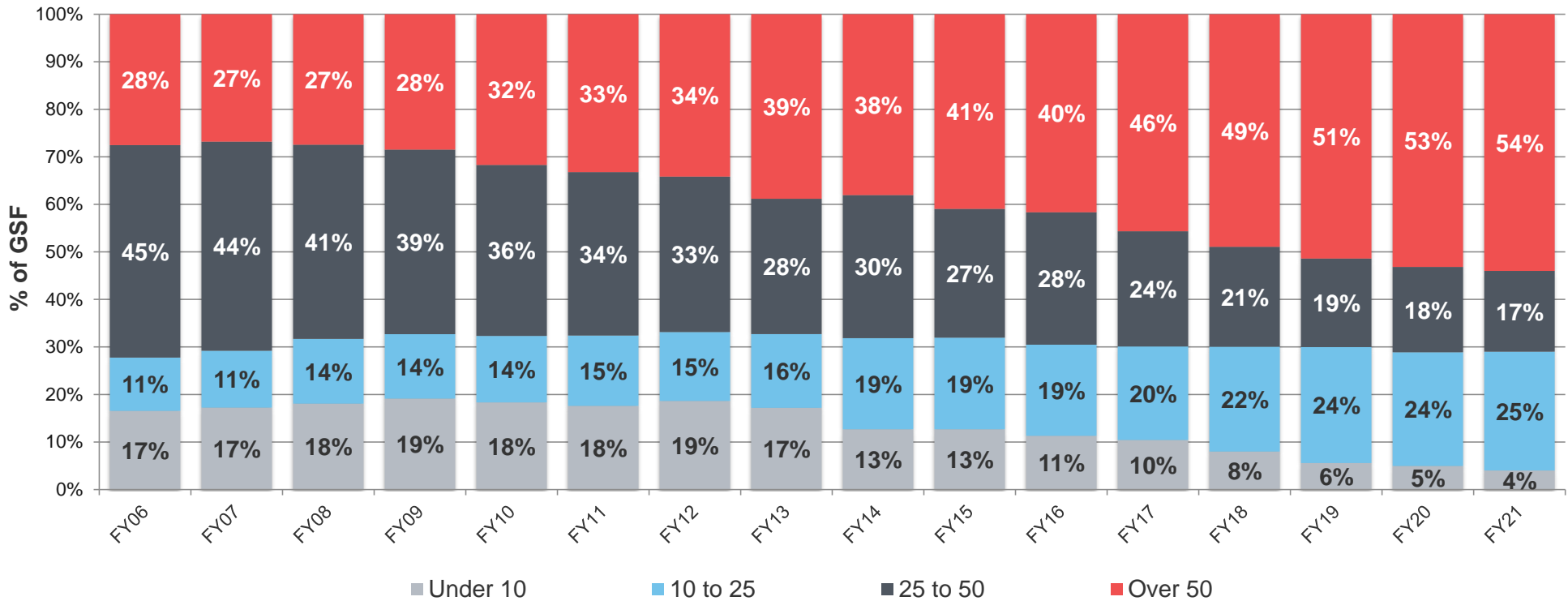
UMA has offset its age the most through renovations: 21 Years



# Maine System Continues to Age Over Time

Percent of GSF over 50 steadily rising

Campus Renovation Age Distribution Over Time

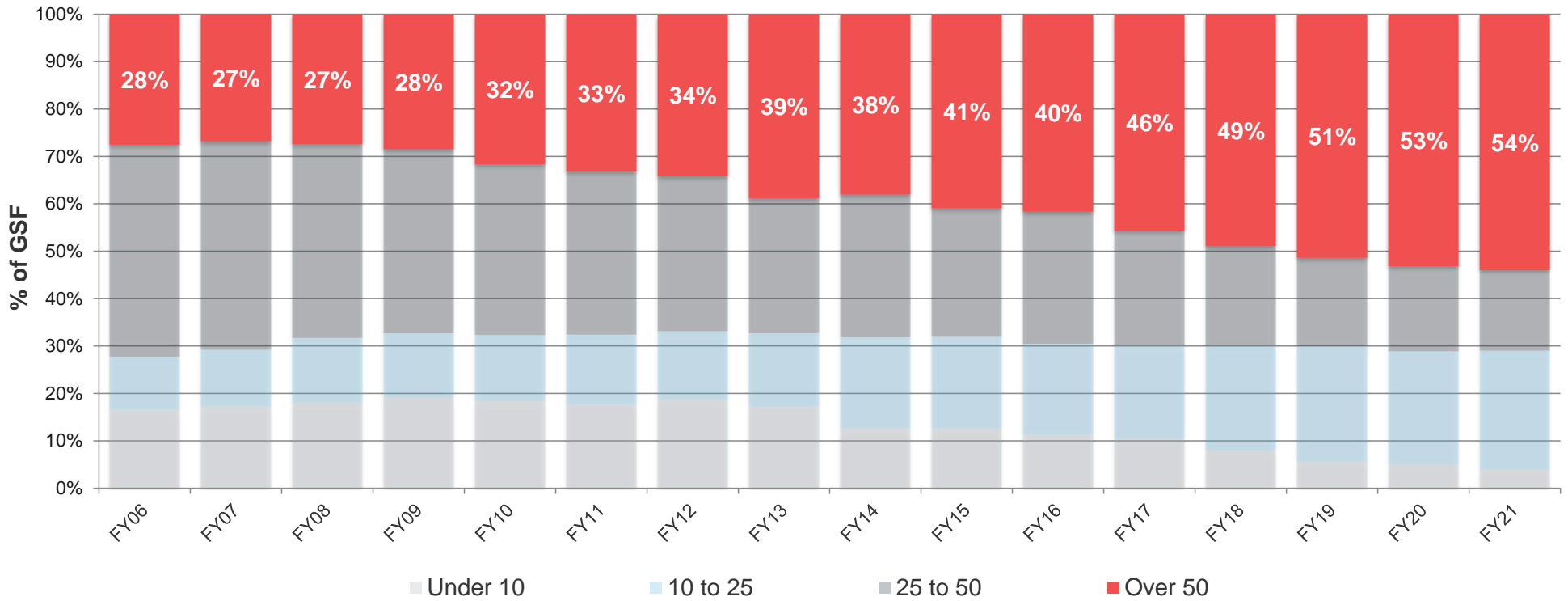


14.2

# Oldest Spaces on Campus Get Older

Space Over 50 almost doubles in 16 years

Campus Renovation Age Distribution Over Time

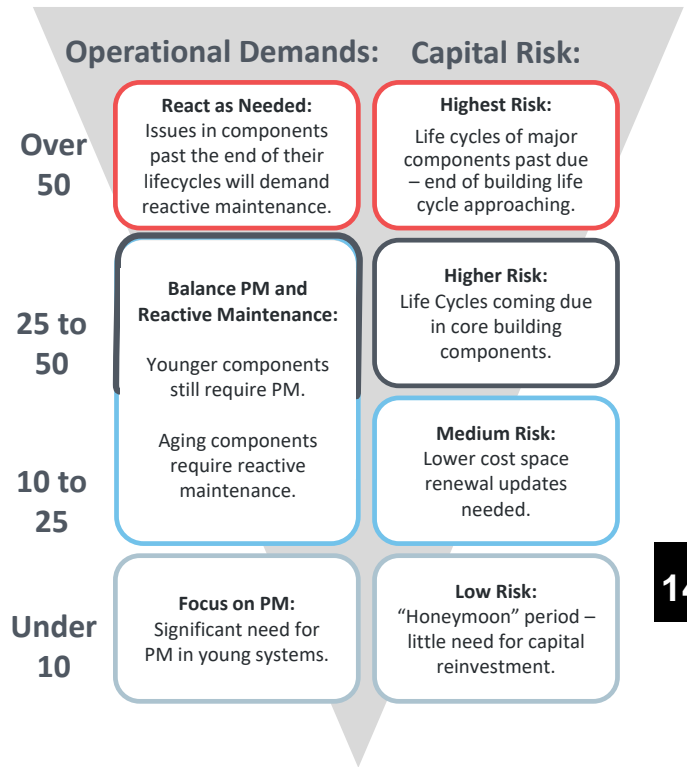
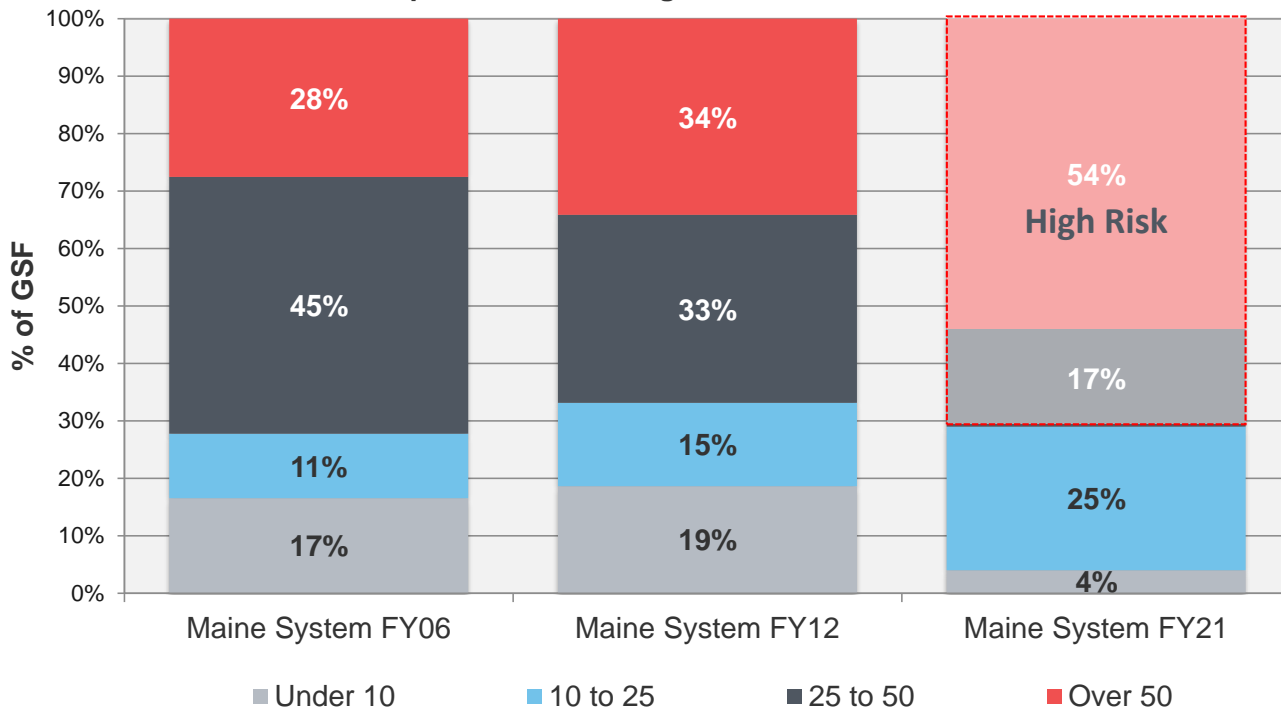


14.2

# 71% of Space Drives Investment Needs at UMS

Buildings over 25 years old require increased capital and operational demands

Campus Renovation Age Distribution Over Time

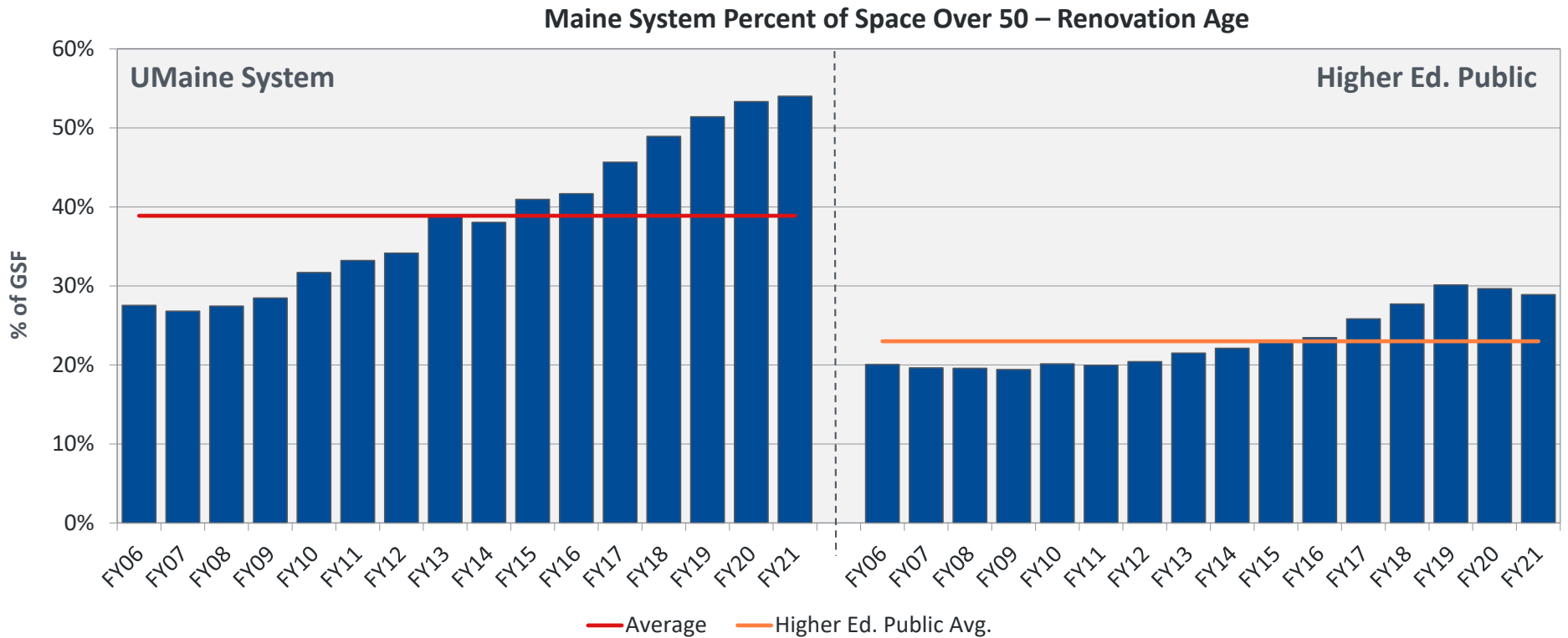


14.2



## Public Institutions Operate With Less High-Risk Space (16% on avg.)

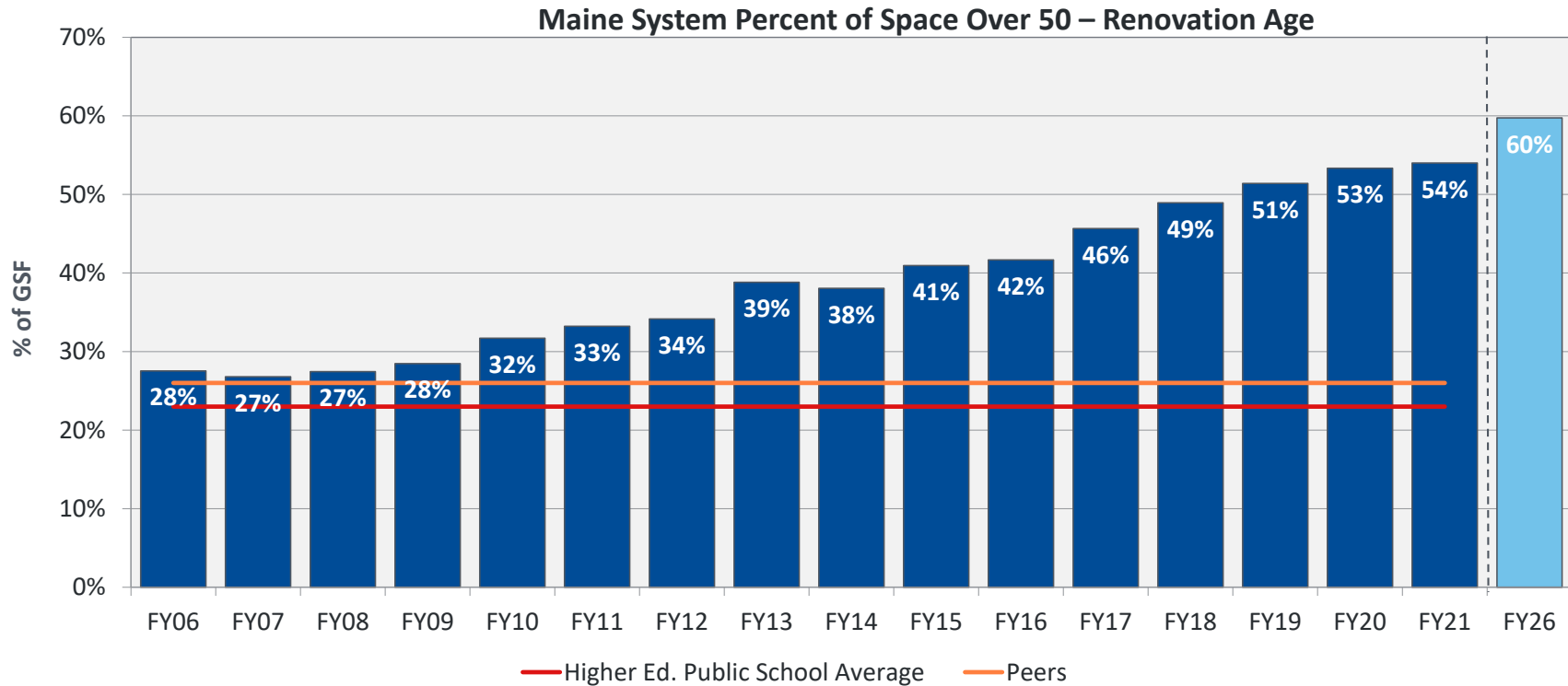
UMS increases High Risk space YOY as Higher Ed Public decreases from FY19 to FY21



14.2

# 60% of Space Will be Over 50 Years Old by FY26

Plan now for major life cycle replacements in these buildings



14.2

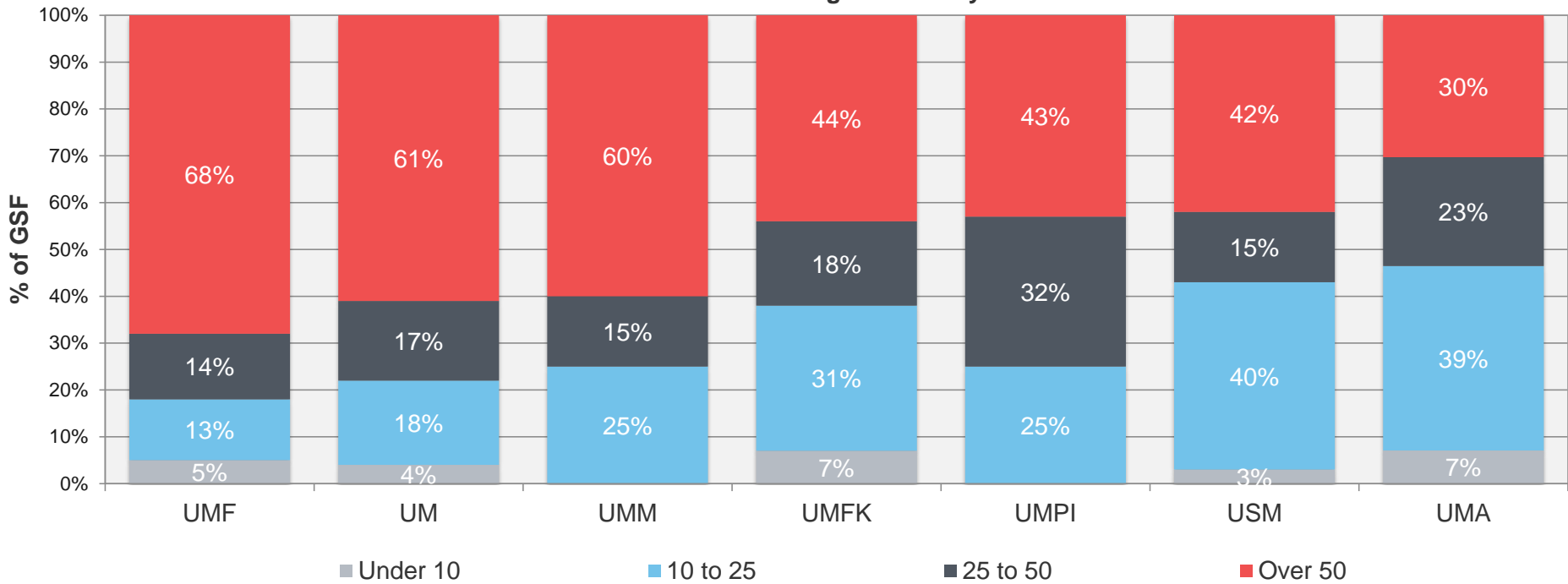




## High Risk Profile Above 50% At All Campuses

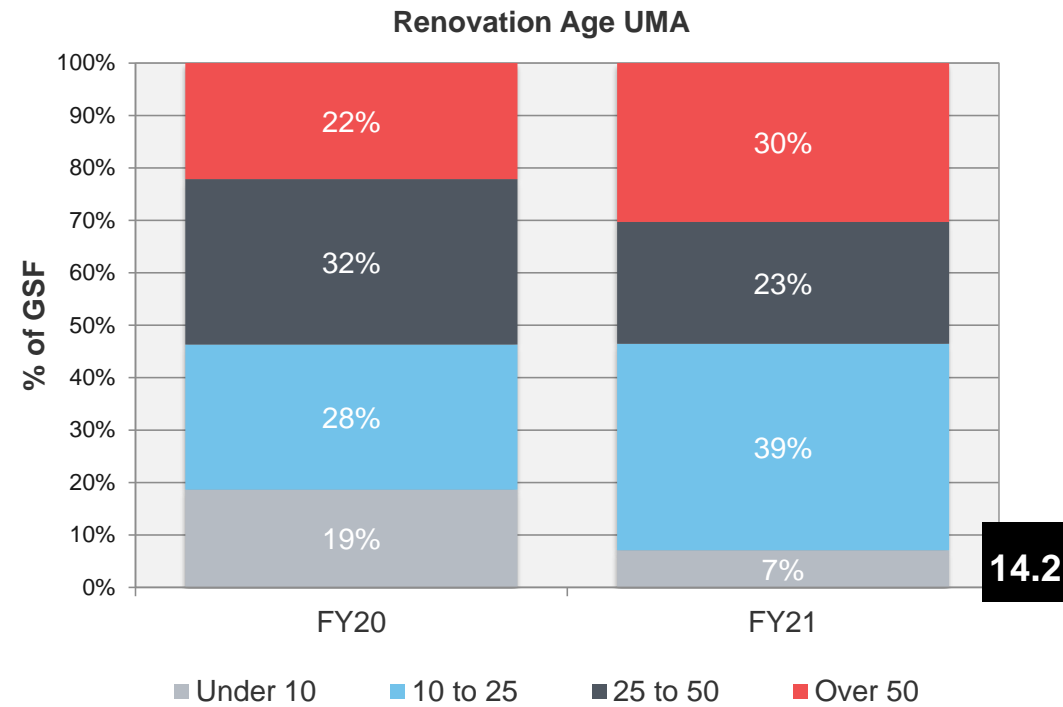
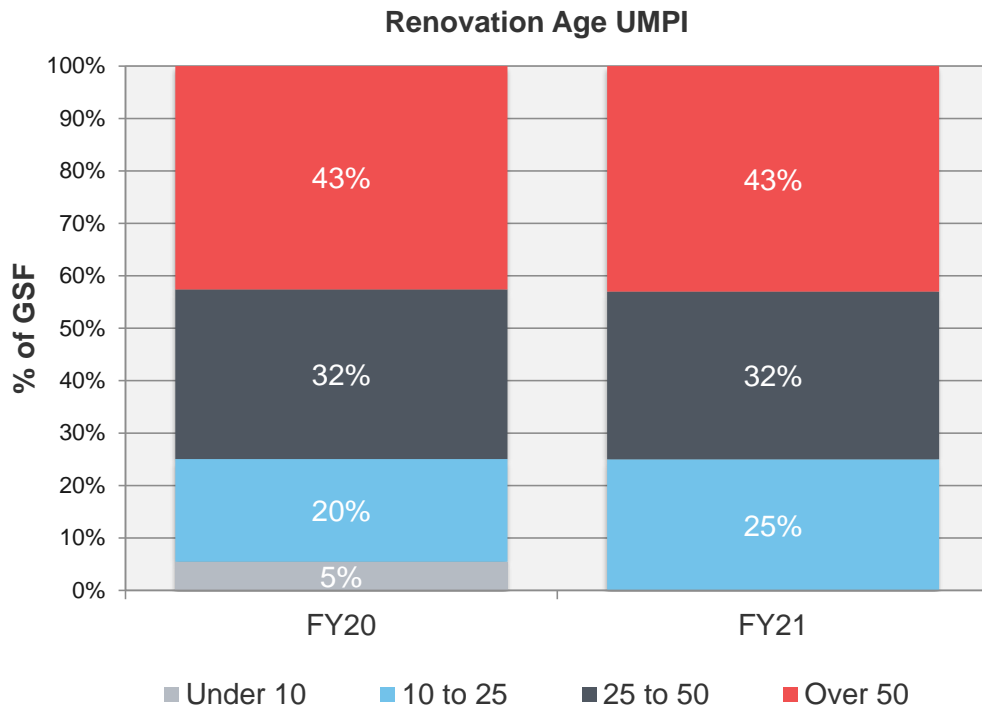
UM, UMM, and UMF have the highest risk based on age profile over 25 years old

FY21 Renovation Age Across System



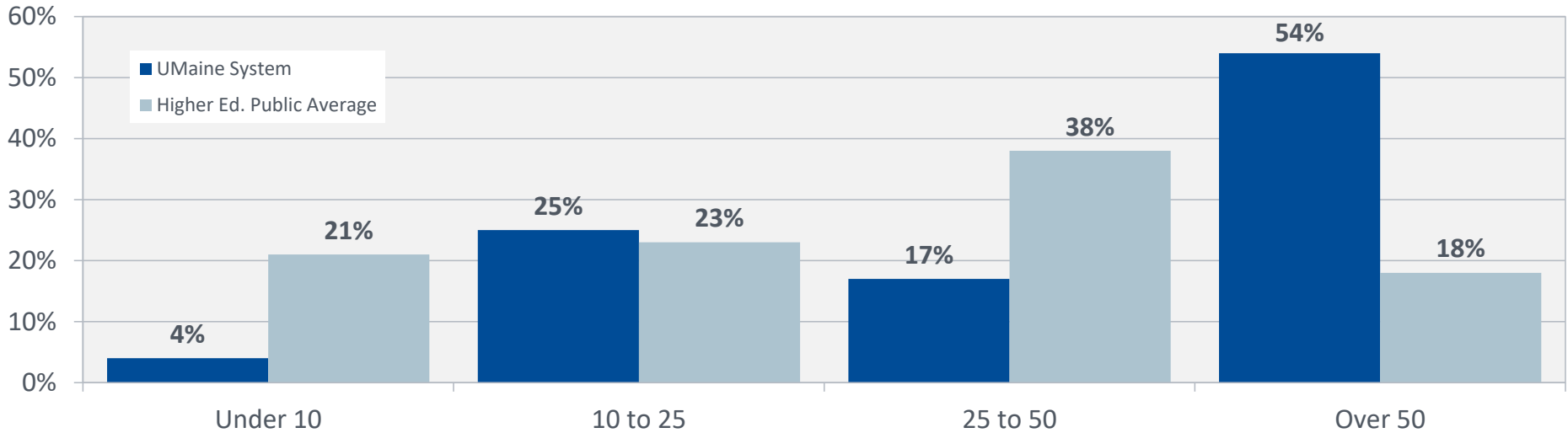
14.2

## UMPI & UMA See Largest Shift in Space Under 10



# UMS' Age Profile is Older Than Public Institutions

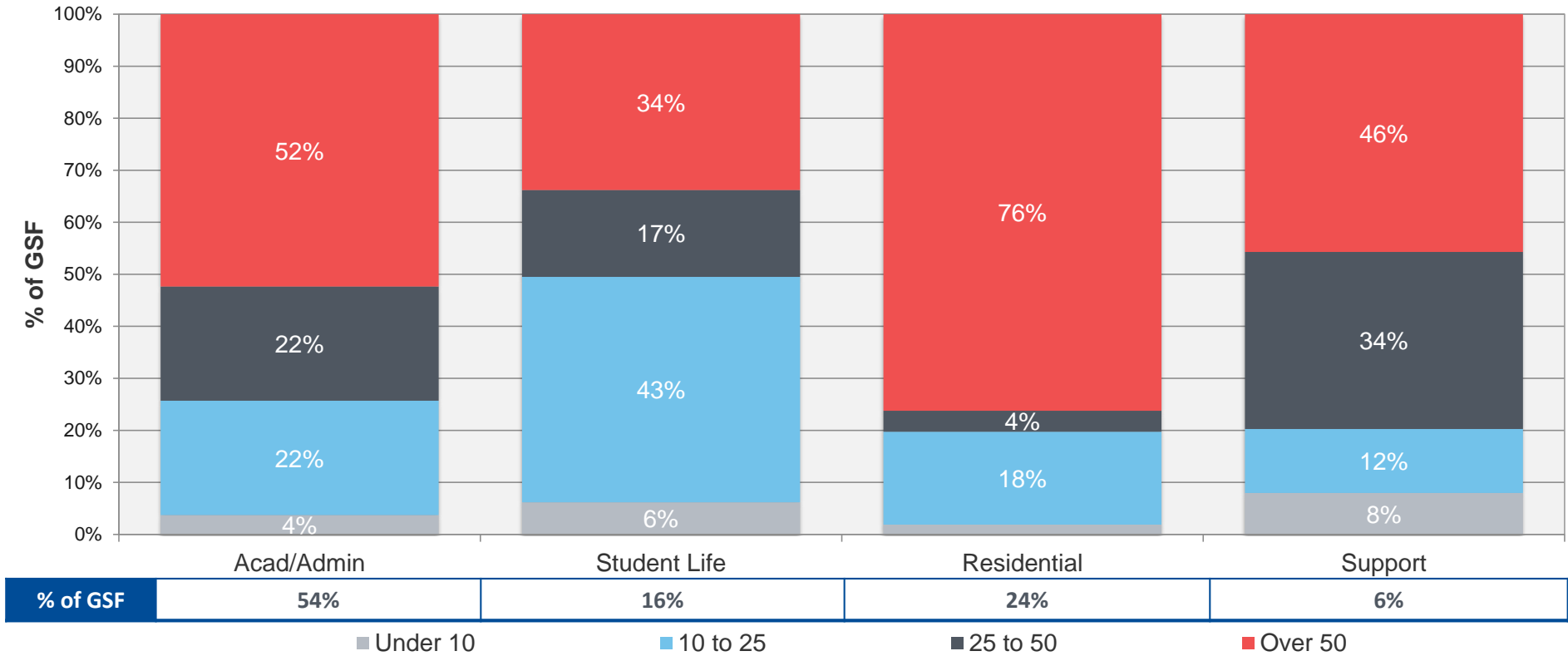
Campus Renovation Age by Category



14.2

# Residential Space Has Largest Amount of Space Over 50

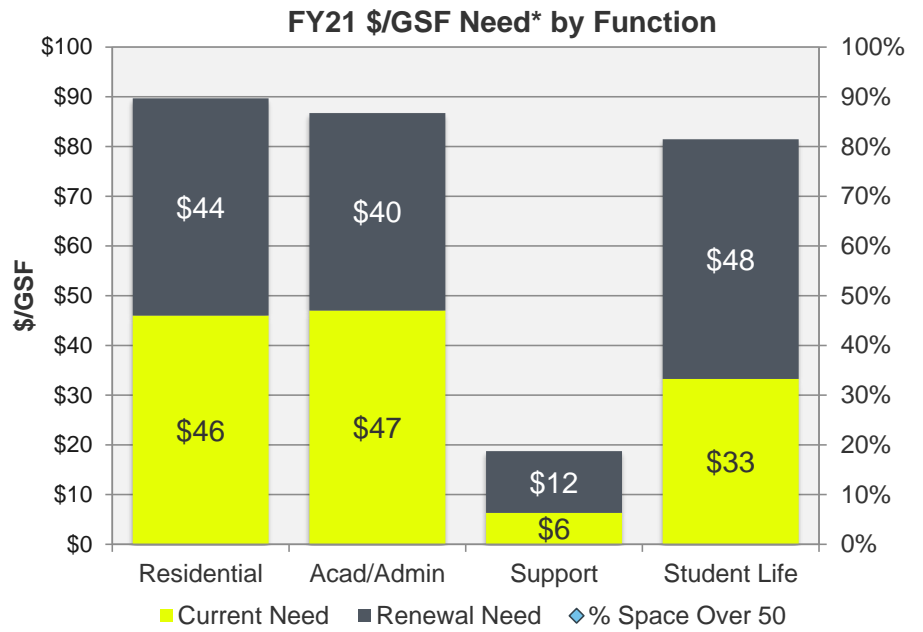
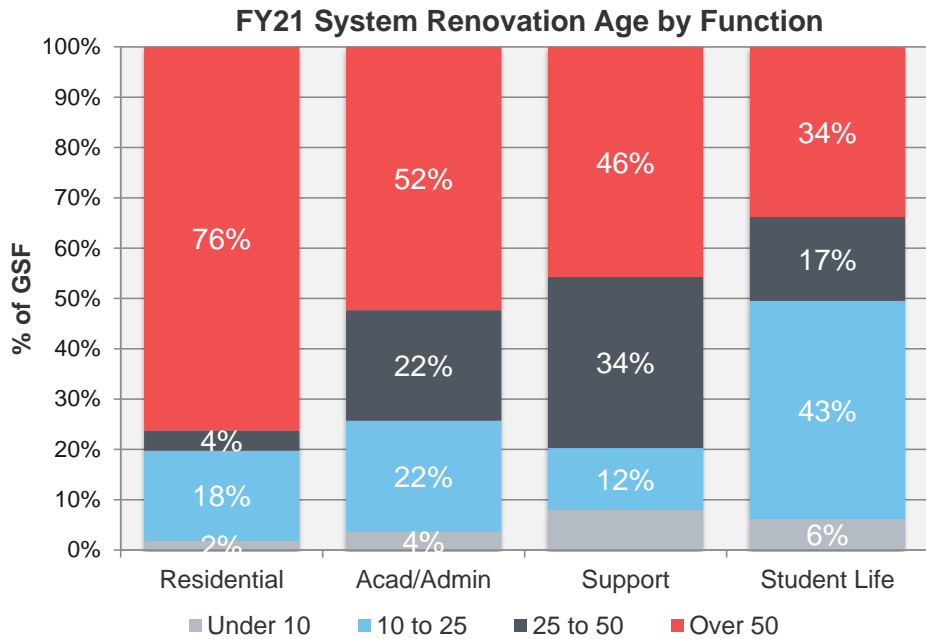
FY21 System Renovation Age by Function



14.2



# High Risk Space Contains Higher Current Need



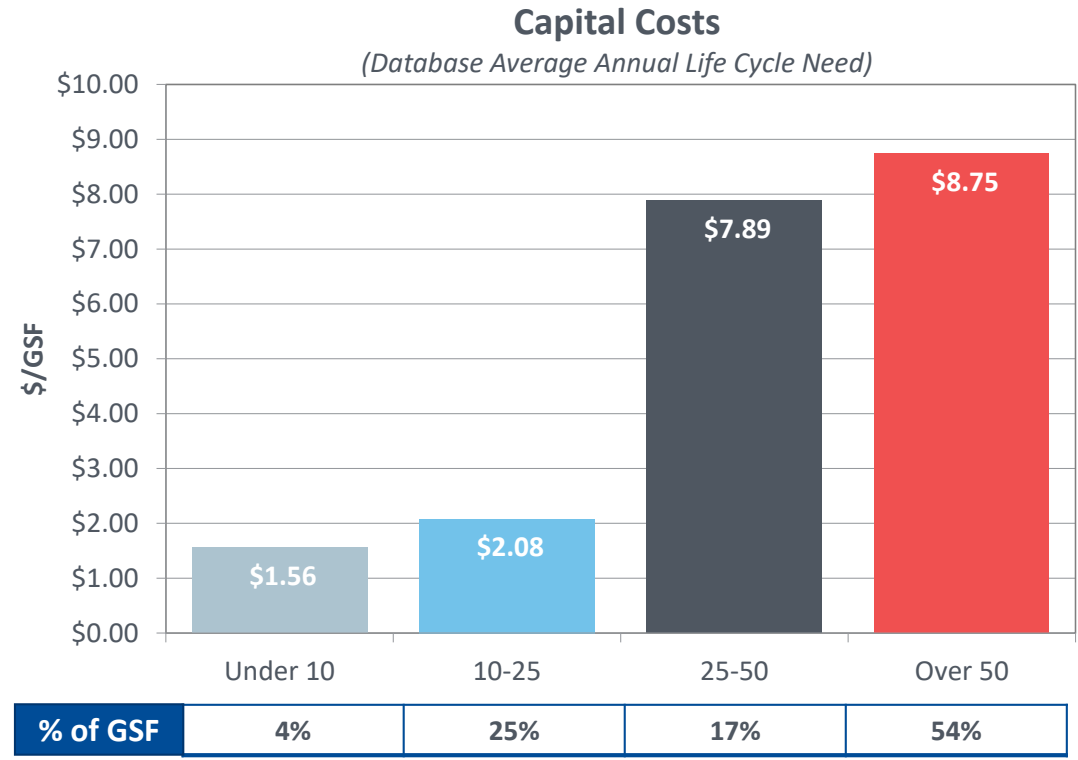
Function	Residential	Acad/Admin	Support	Student Life
% of GSF	24%	54%	6%	16%

\*Need is based on prediction data excluding modernization & infrastructure need

# Typical Capital Demands by Age Category

As buildings age the capital demands coming due progressively increase

Capital Risk:	Operational Demands:
<b>Highest Risk:</b> Life cycles of major components past due – end of building life cycle approaching.	<b>React as Needed:</b> Issues in components past the end of their lifecycles will demand reactive maintenance.
<b>Higher Risk:</b> Life Cycles coming due in core building components.	<b>Balance PM and Reactive Maintenance:</b> Younger components still require PM.
<b>Medium Risk:</b> Lower cost space renewal updates needed.	Aging components require reactive maintenance.
<b>Low Risk:</b> “Honeymoon” period – little need for capital reinvestment.	<b>Focus on PM:</b> Significant need for PM in young systems.

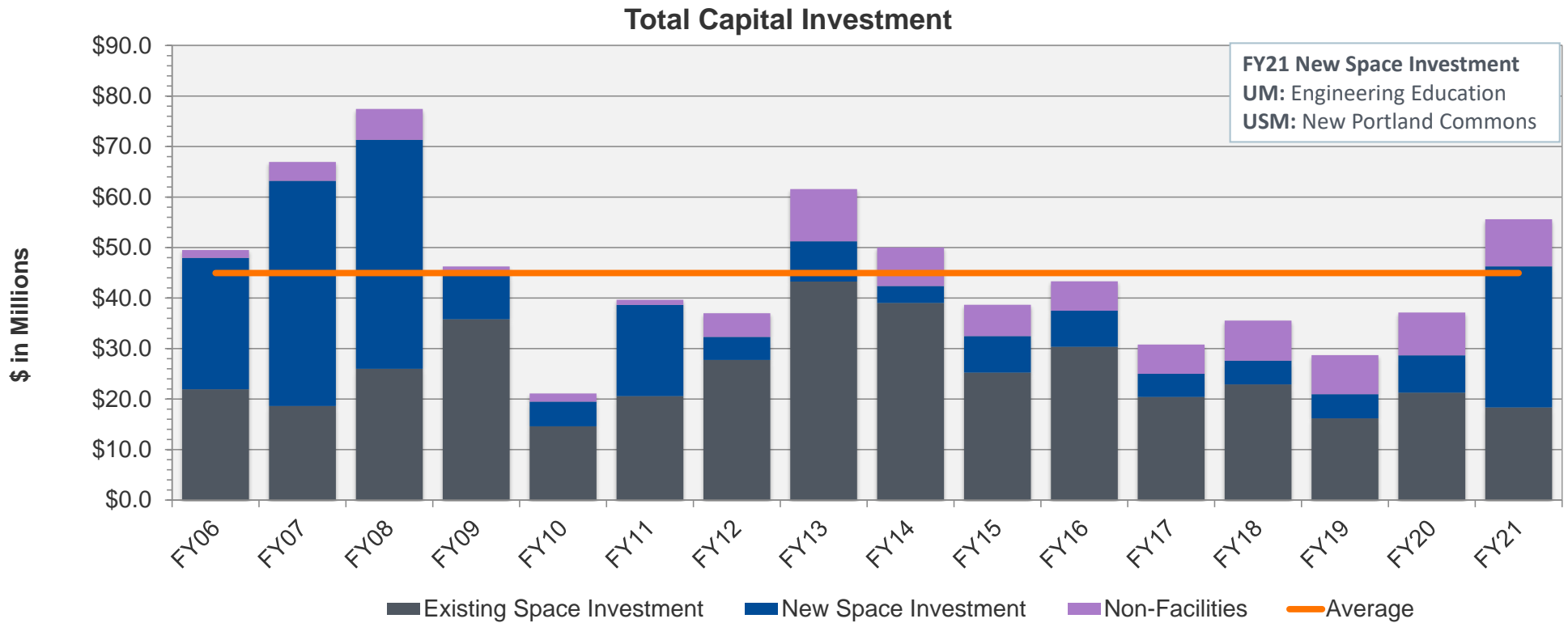


# Asset Value Change

14.2

# Total Capital Investment Increases in FY21

Includes infrastructure investments



14.2

Examples of Non-Facilities work include: Study/Design fees, IT work, and demolition costs. These are necessary capital costs for Facilities Operations but do not add value/enhance existing buildings.



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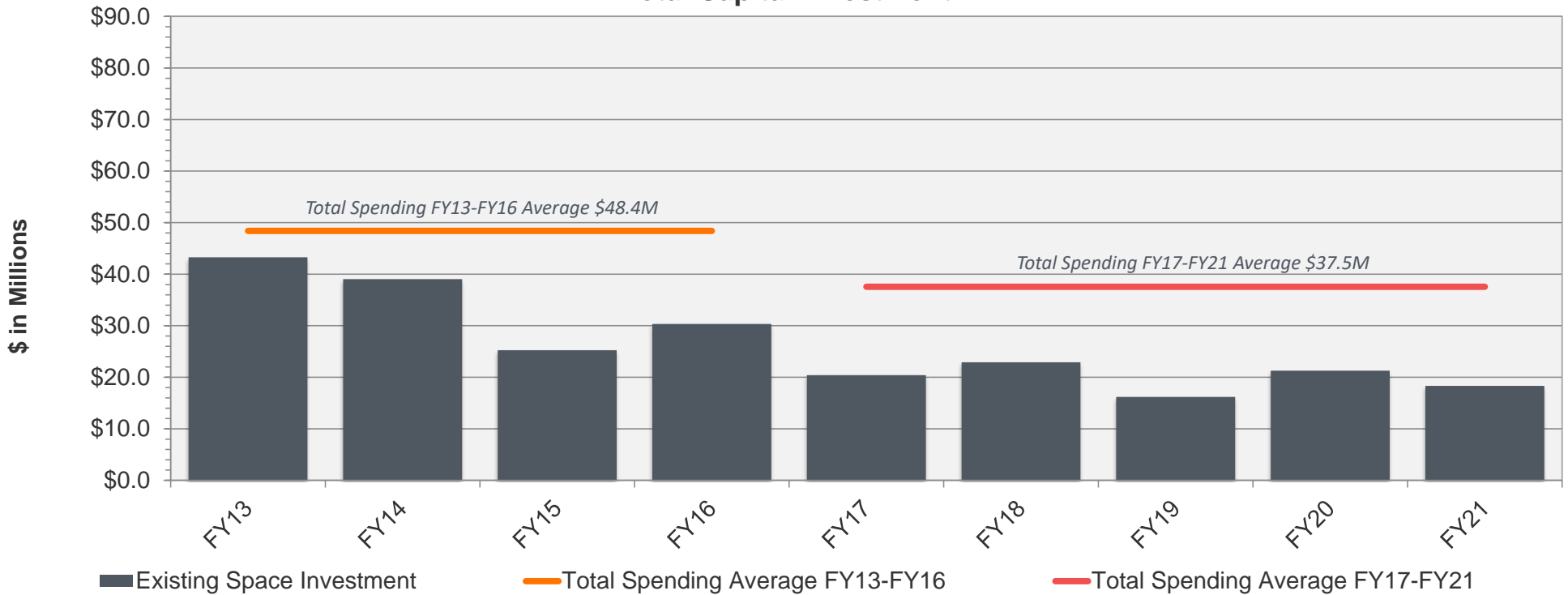




# Existing Space Capital Investment Decreases Over Time

Recent 5-year average falls \$10.9M below historical high investment during FY13-16

**Total Capital Investment**

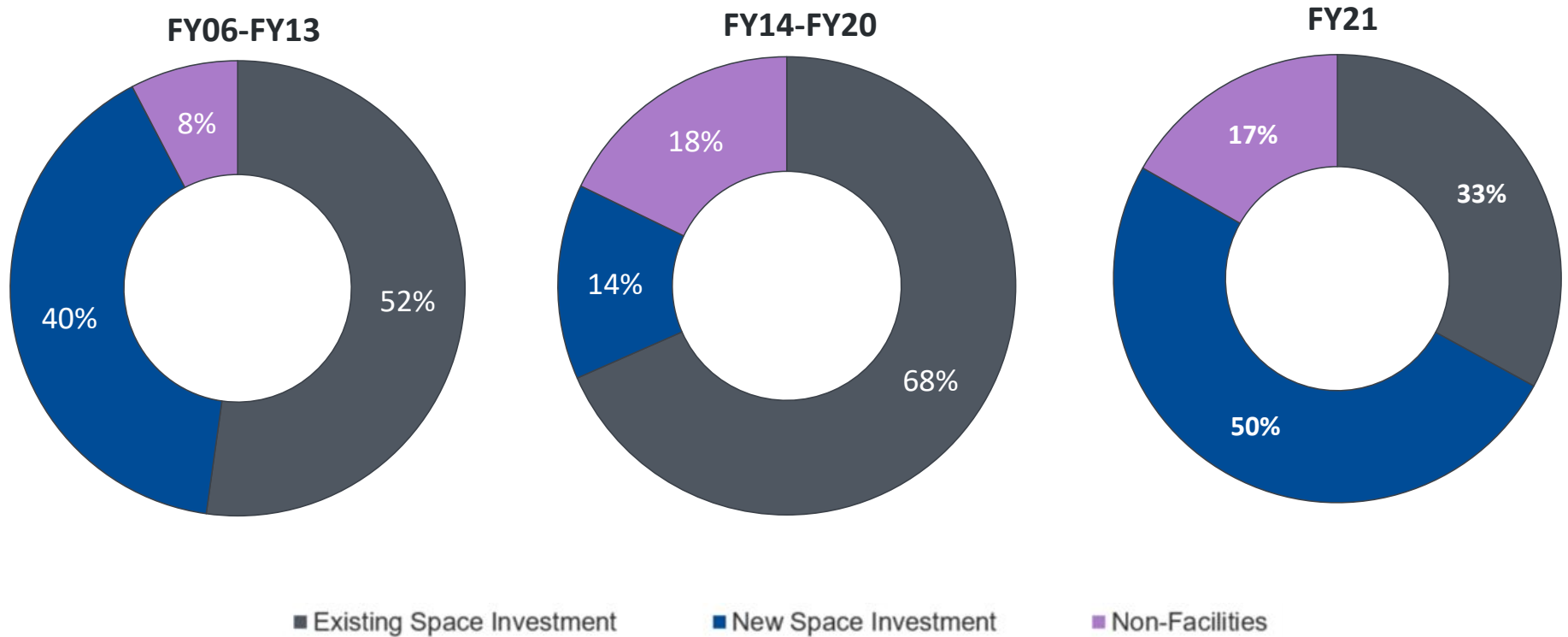


14.2

*Includes infrastructure investments*

## Investments Shifts Back to New Space

Historical existing space investments help to slow backlog growth

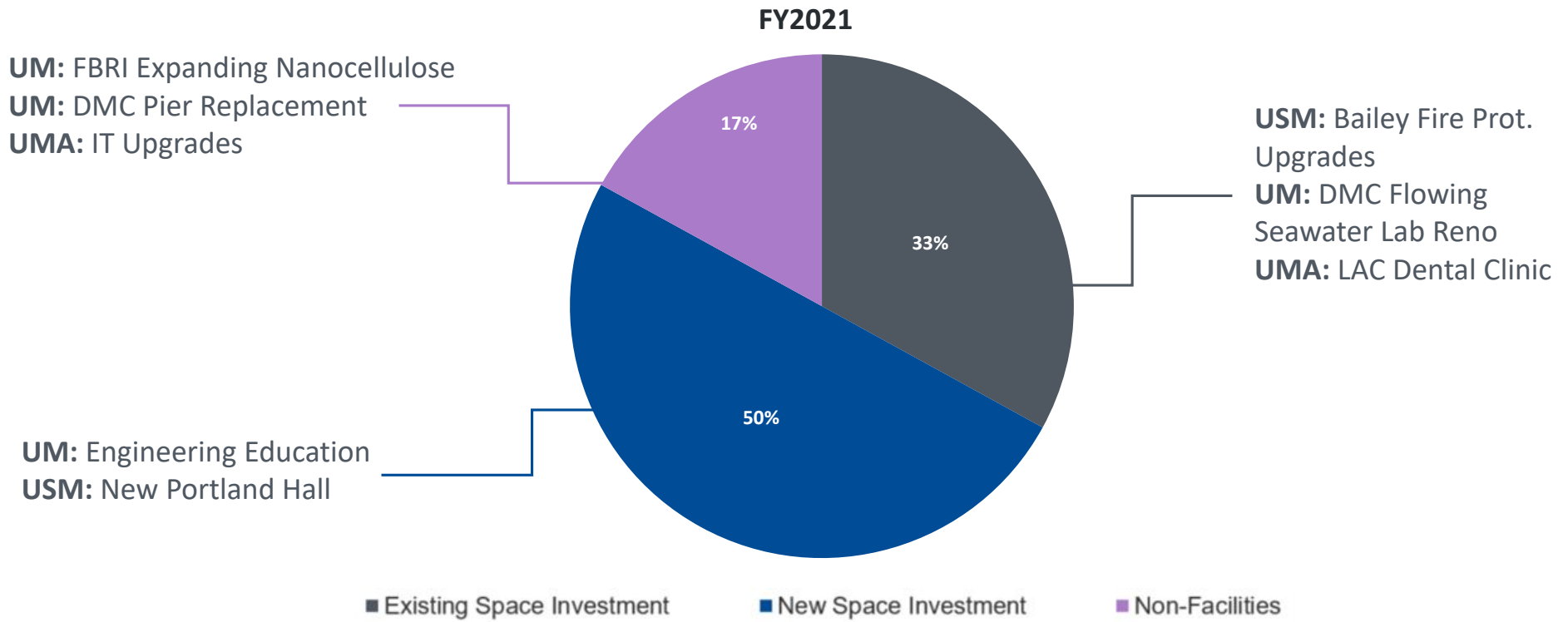


14.2

*Examples of Non-Facilities work include: Study/Design fees, IT work, and demolition costs. These are necessary capital costs for Facilities Operations but do not add value/enhance existing buildings.*

# New Space Drives FY21 Investment

Highlighting strategic plans for record setting capital expenditures in coming years

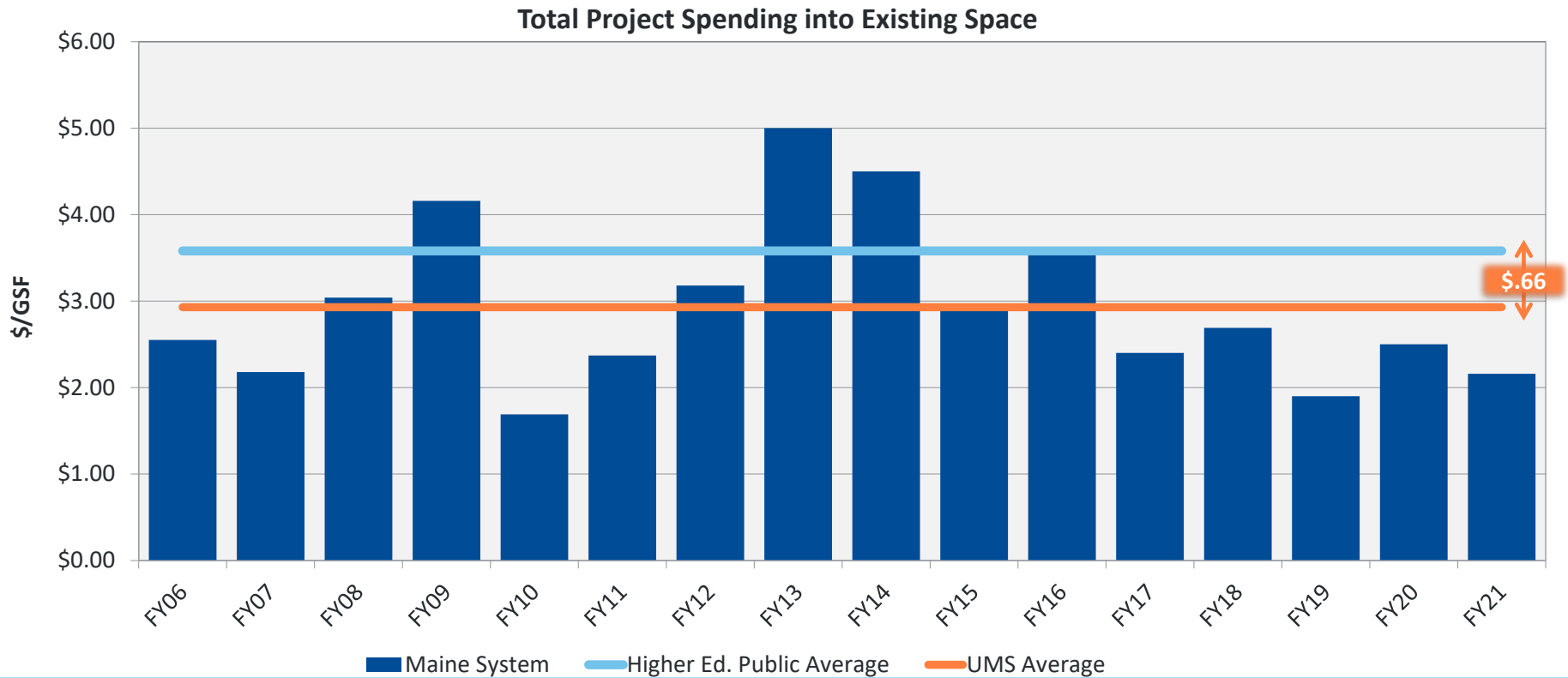


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*Examples of Non-Facilities work include: Study/Design fees, IT work, and demolition costs. These are necessary capital costs for Facilities Operations but do not add value/enhance existing buildings.*

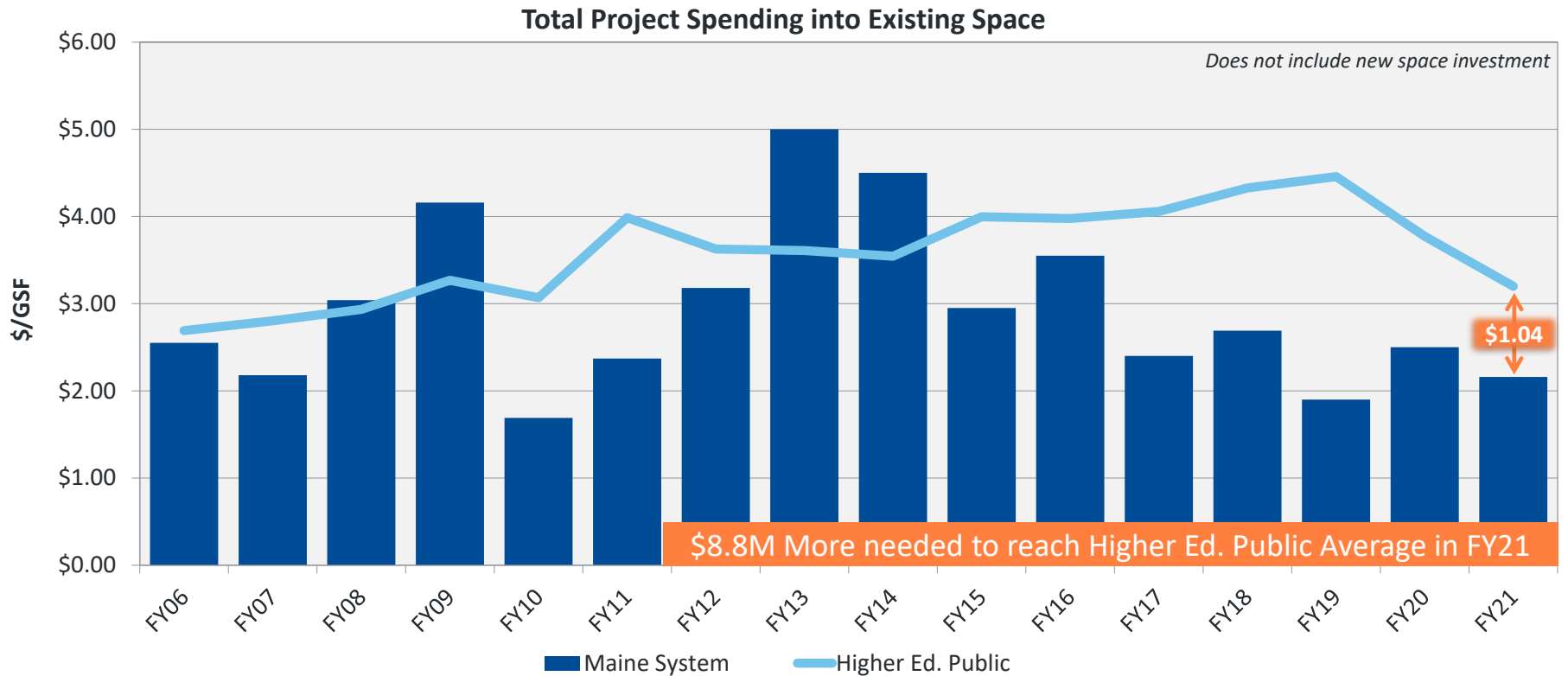
# Existing Space Investment vs. Public Institutions

Peers invest an average of \$.66/GSF more than UMS from FY06-FY21



# Higher Ed Public Institutions See Dramatic Drop in FY21

UMS gap to Public Institutions investment widens \$1.04/GSF in FY21

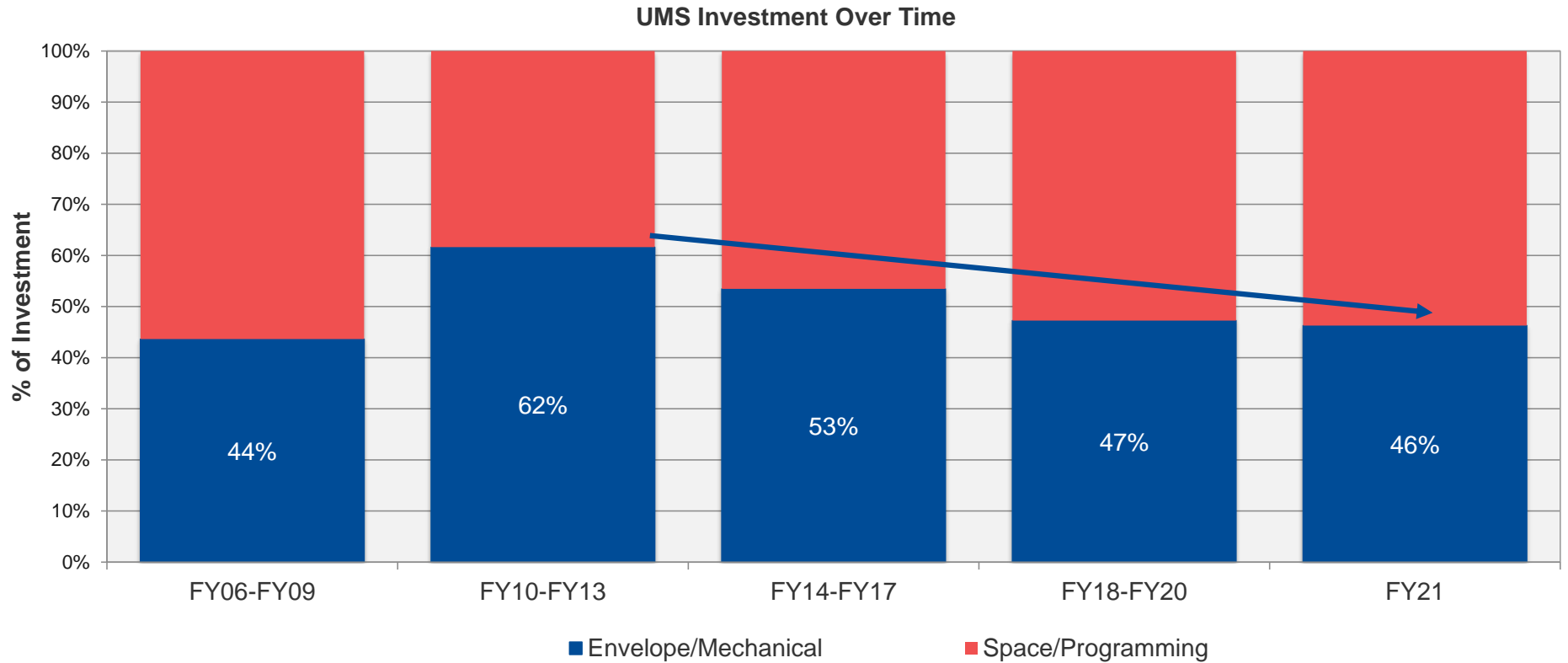


14.2



# Investment Focus Shifts Towards Space/Program

Moving investments away from high return envelope/mechanical projects



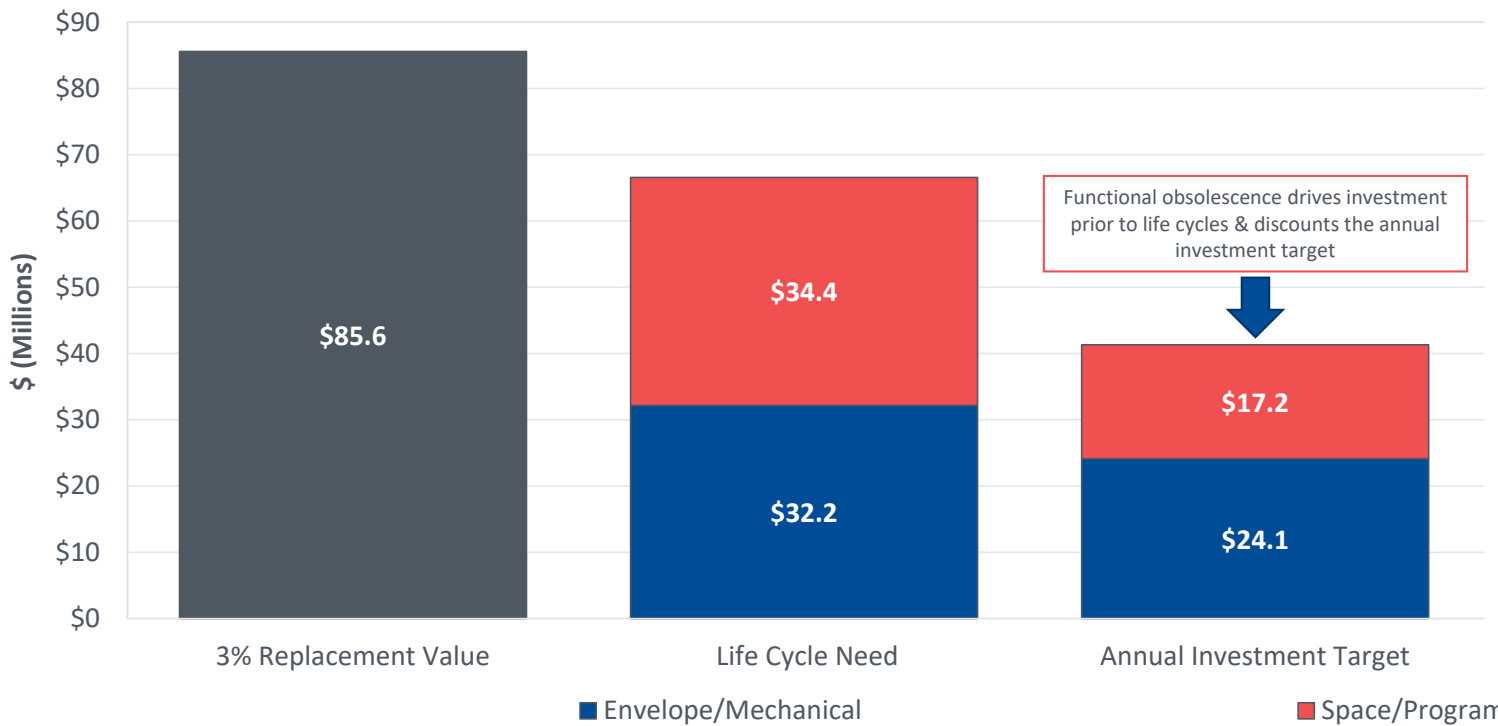
14.2

Does not include infrastructure investments.

# UMS FY21 Annual Investment Target: \$41.3M

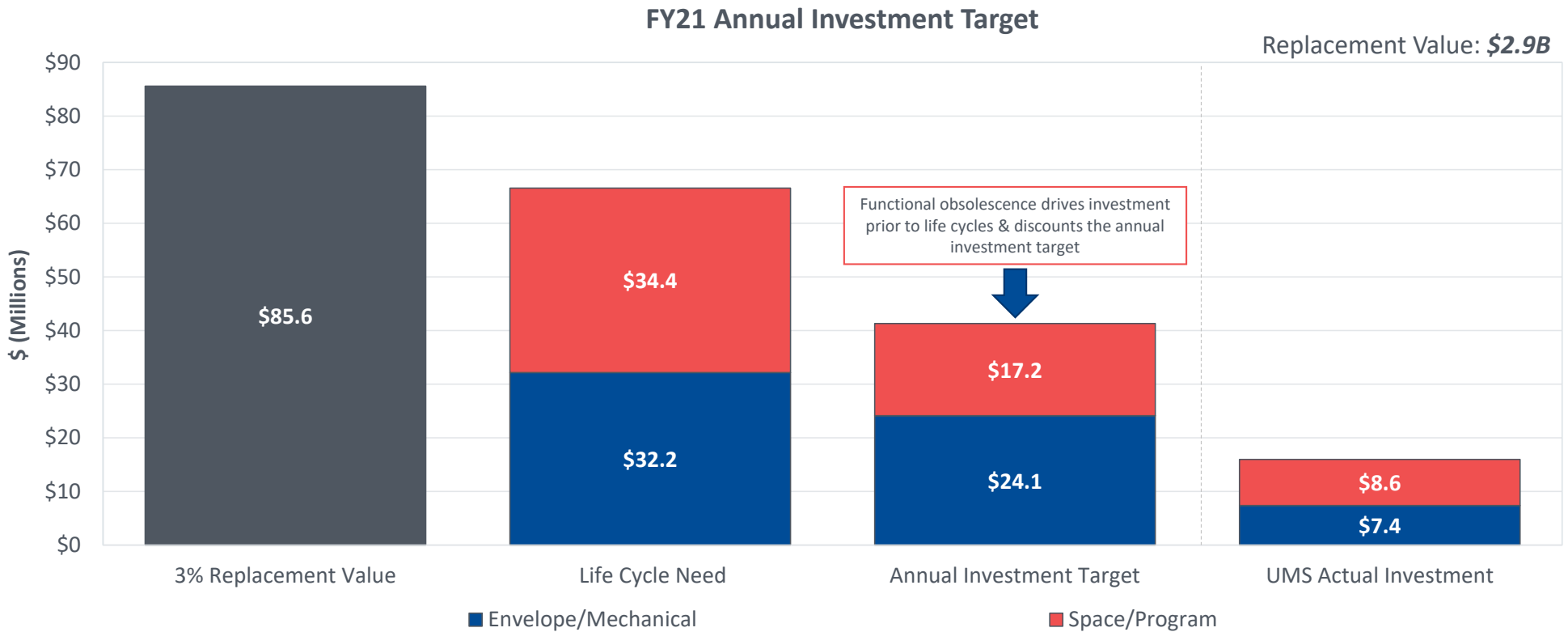
FY21 Annual Investment Target

Replacement Value: **\$2.9B**



14.2

# UMS FY21 Annual Investment Target: \$41.3M



14.2

*Does not include infrastructure, new space or non-facilities spending*



# UMS Falls \$25.3M Short of Annual Investment Target in FY21

Deferral to Backlog of Need Continues in FY21

Historical Capital Investment in Existing Space vs Funding Target

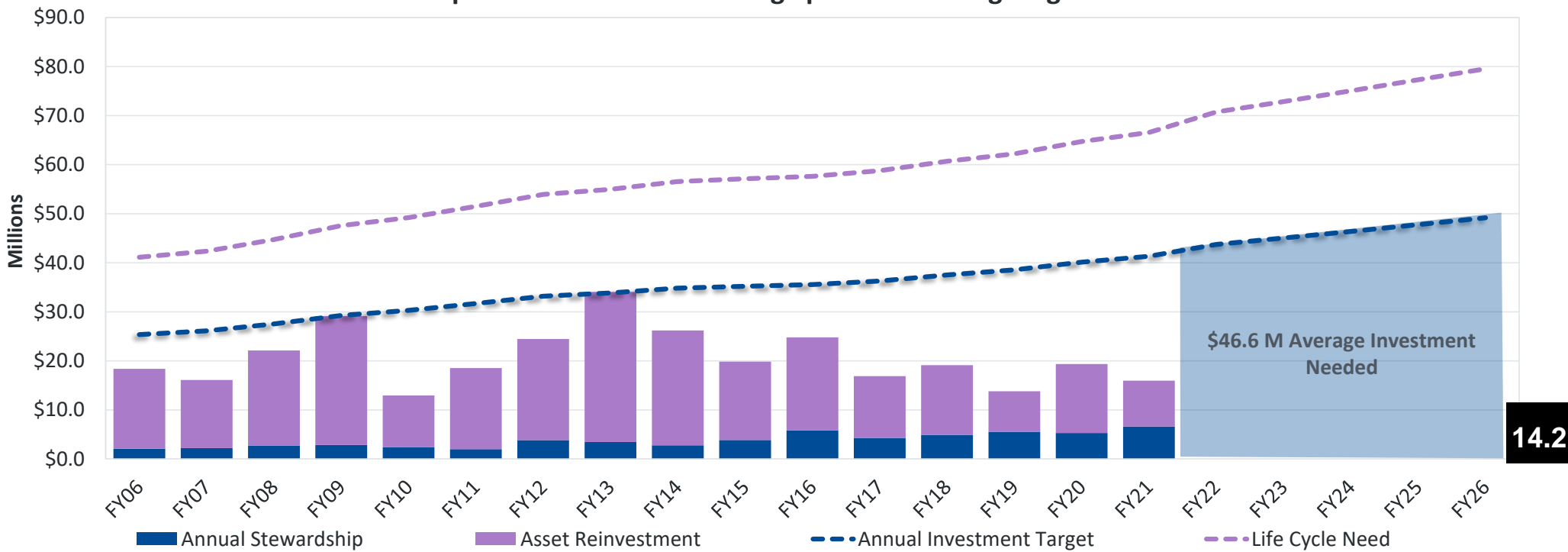


Does not include infrastructure, new space or non-facilities spending

## Sightlines' Targets Continue to Increase Over Time

Approximately \$45-\$60M needed each year to keep System assets at steady NAV

Capital Investment in Existing Space vs Funding Target Over Time

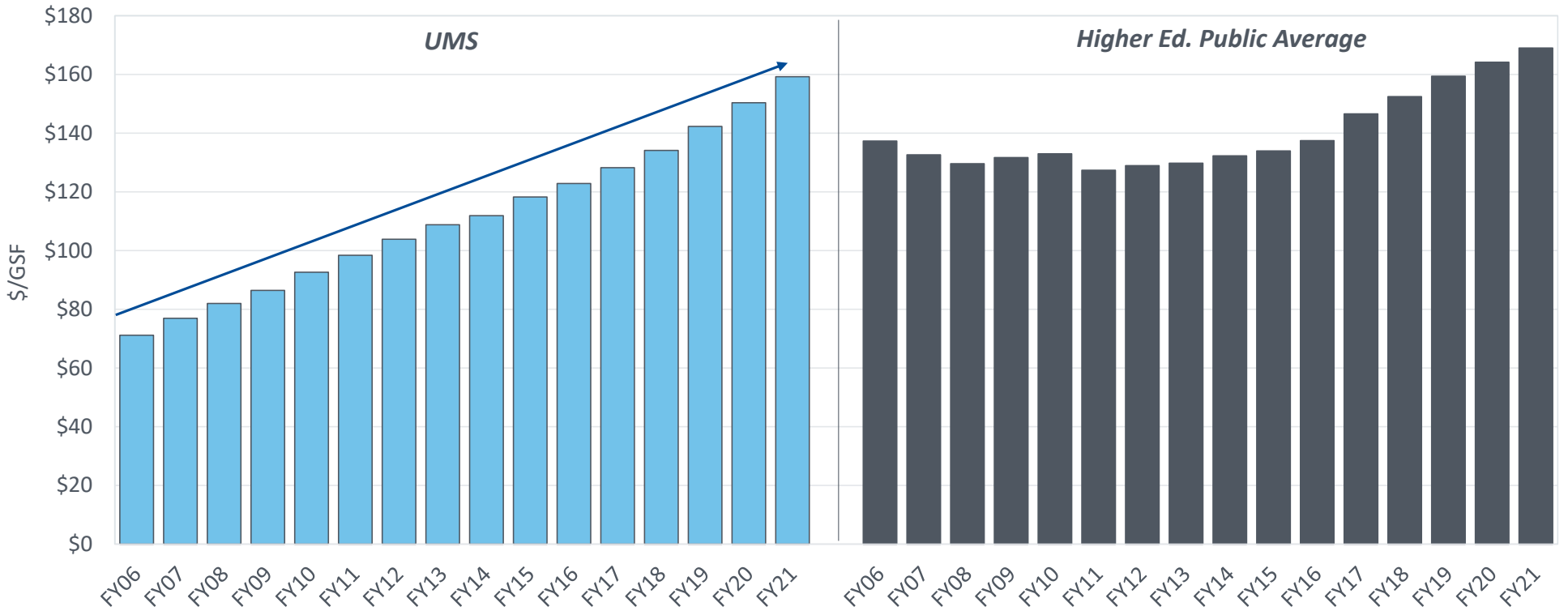


Does not include infrastructure, new space or non-facilities spending



# Asset Reinvestment Need Growth Similar to Higher Ed. Public

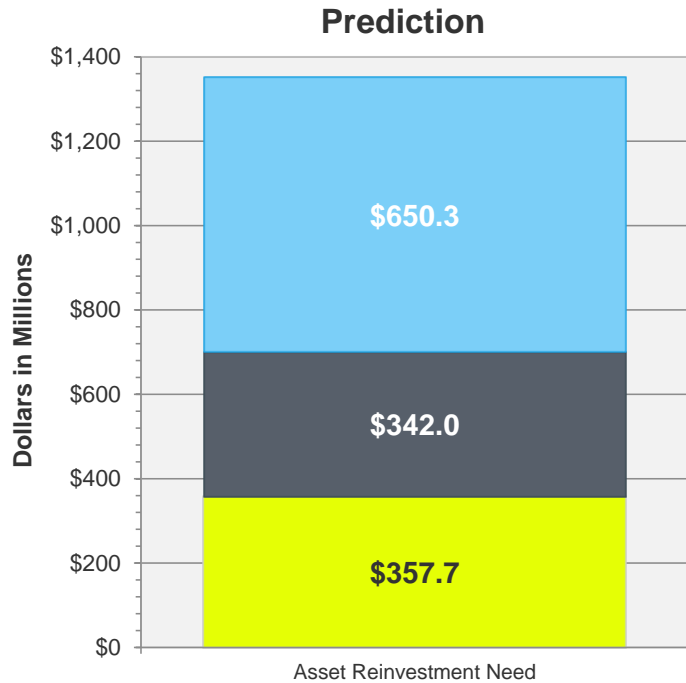
Asset Reinvestment Need vs. Peers



14.2

# \$1.35B of Need at UMS Over the Next 10 Years

Current Need or Deferred Maintenance accounts for 26% of total need, \$357.7M



### Modernization and Infrastructure

- ✓ **Combination of Funds**
- ✓ Estimated using a combination of the Gordian’s database and financial modeling

### Renewal Need

- ✓ **“Keep-Up” Funds**
- ✓ Life Cycle Needs coming due between FY22 – FY31

### Current Need

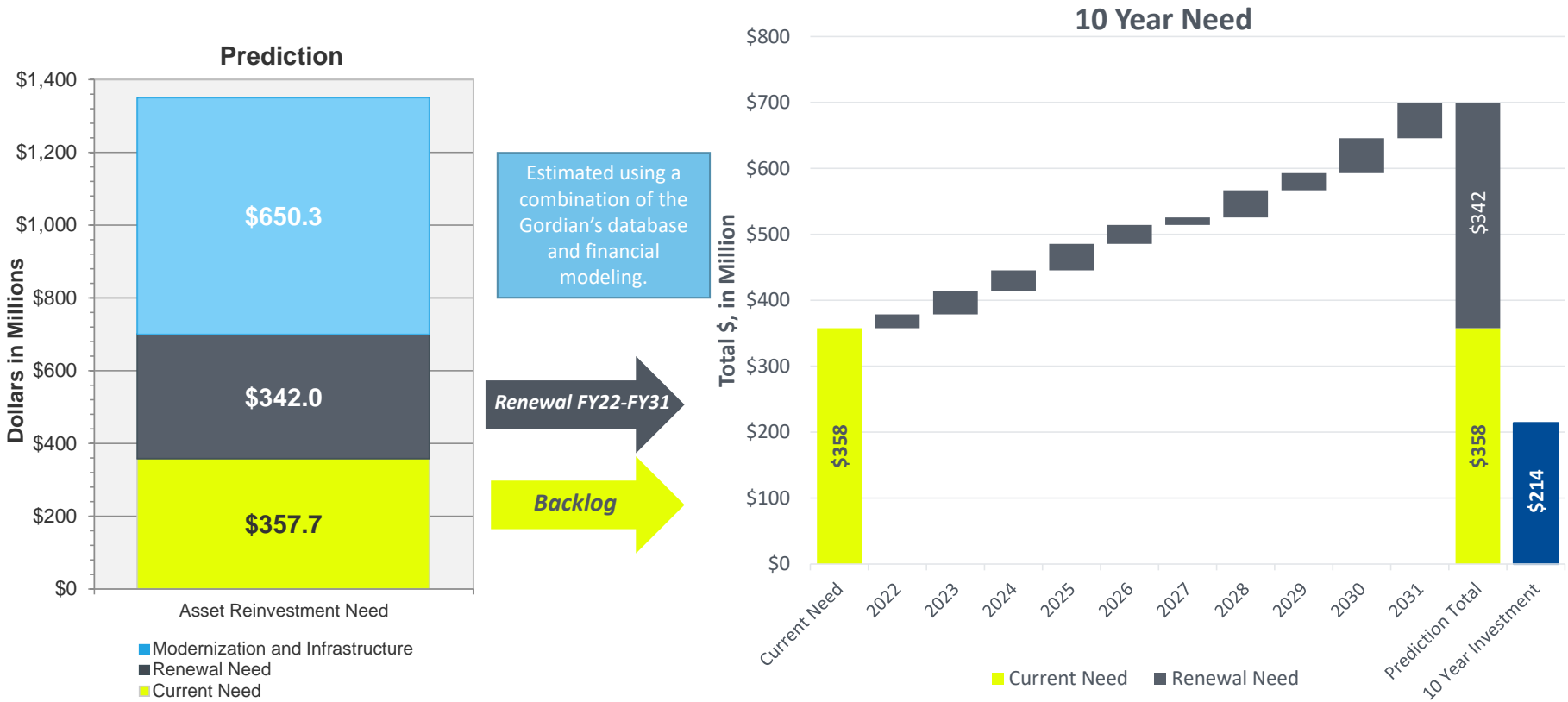
- ✓ **“Catch-Up” Funds**
- ✓ Deferred Maintenance
- ✓ The subsystem has already failed
- ✓ The subsystem is functioning with substantial degradation of efficiency or performing at increased cost

■ Modernization and Infrastructure ■ Renewal Need ■ Current Need

14.2

# Planning Investments Over the Next Ten Years

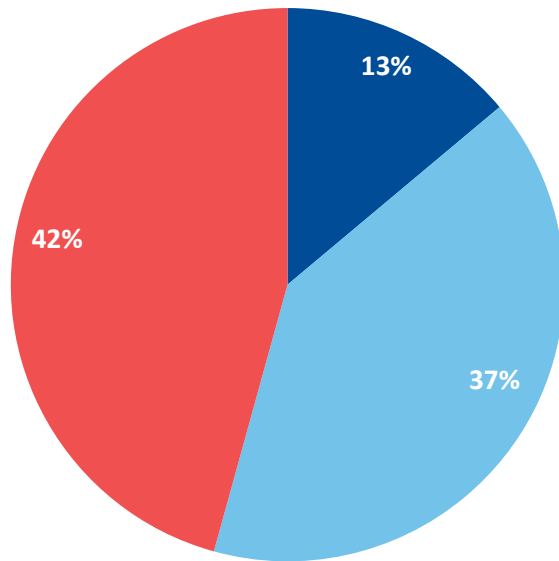
Current Need or Deferred Maintenance accounts for 26% of total need, \$357.7M



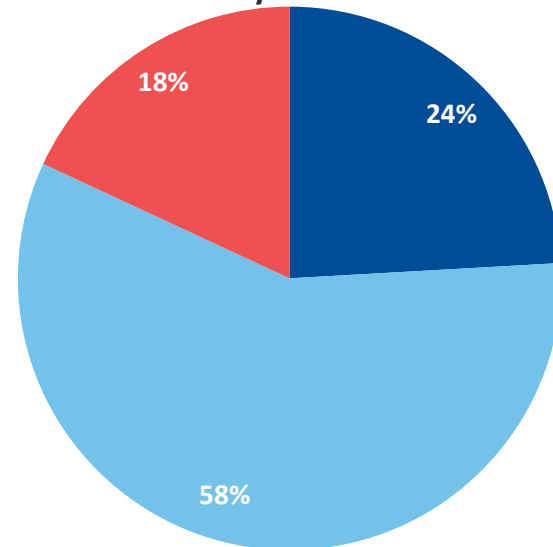
## Continued Investment in Mechanical and Envelope Needed

UMS invested only 30% of required 10 year need in the prior 10 years

FY12-FY21 Historical Project Investment



Distribution of Maine System Need\* by System



■ Envelope ■ Mechanical ■ Interiors

\$214M Invested

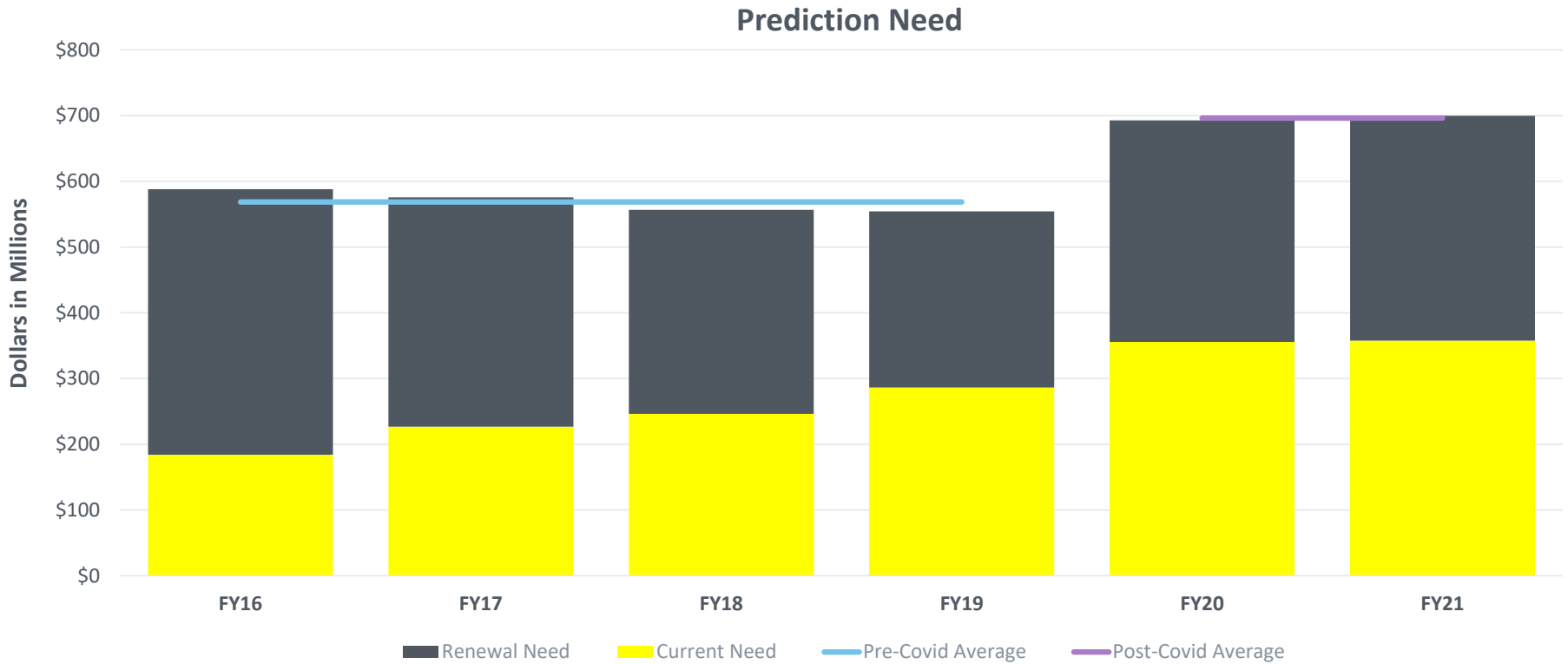
\$699.7M of Need

\*Need includes backlog and renewal projects, not modernization or infrastructure work

42

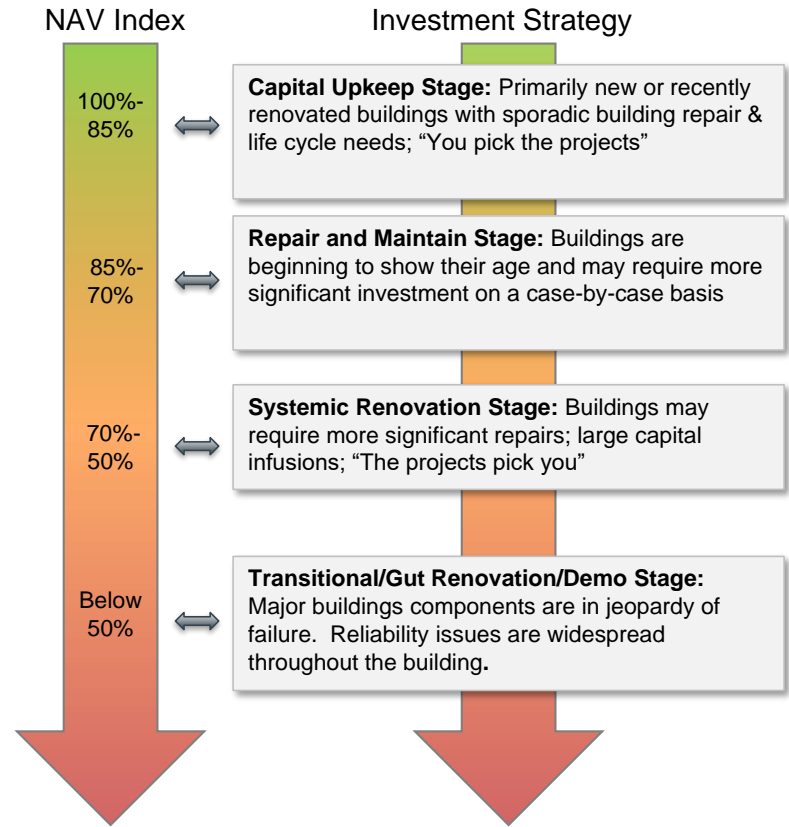
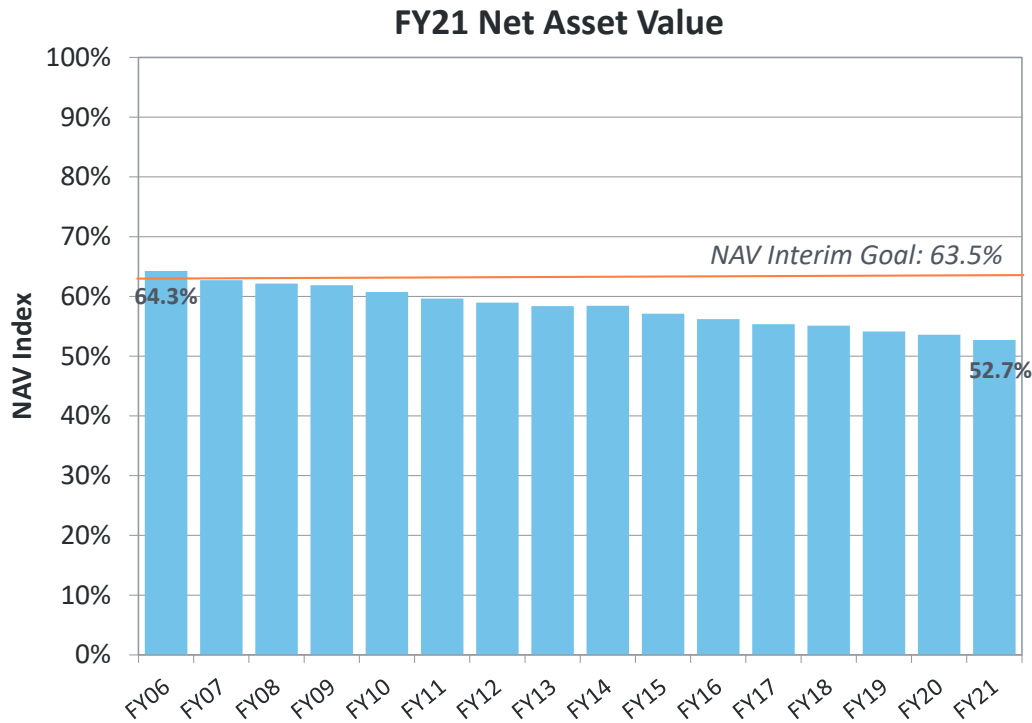
# Investment Strategy Keeps Predicted Need Steady

Additional modernization, program and infrastructure investments still needed



14.2

# Net Asset Value Over Time; Below KPI Interim Goal



14.2

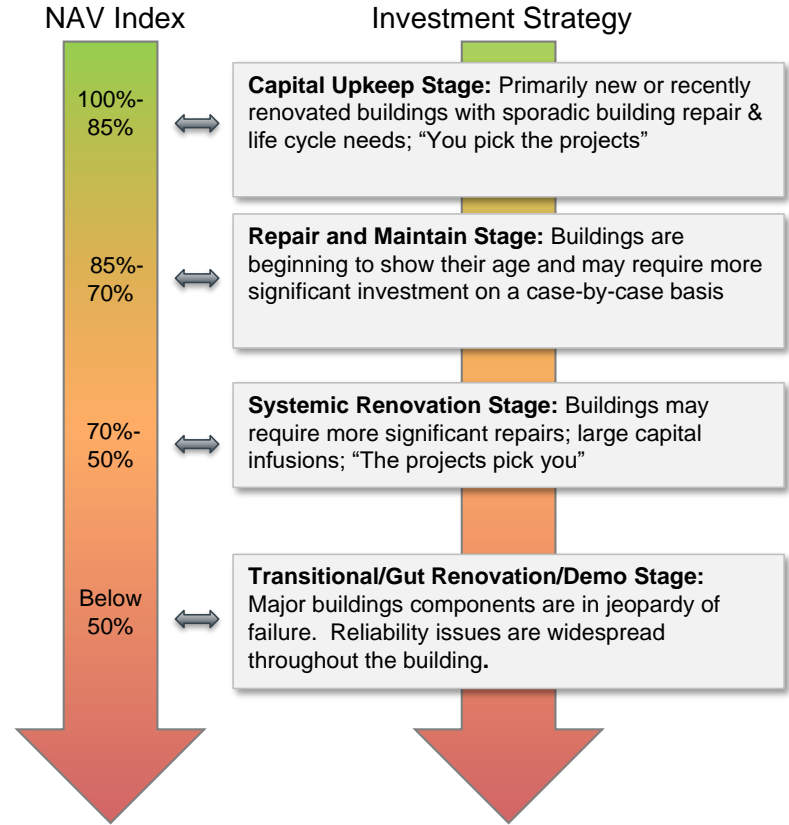
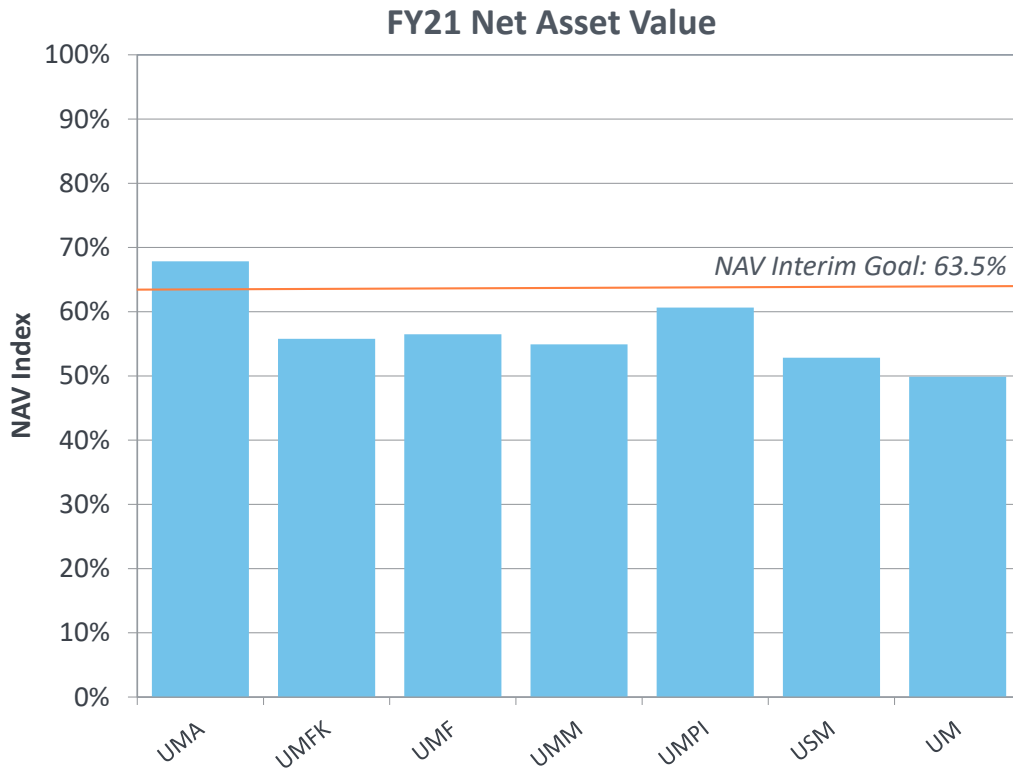


$$\text{Net Asset Value} = \frac{\text{Replacement Value} - \text{Backlog}}{\text{Replacement Value}}$$





# FY21 Net Asset Value By Campus



14.2



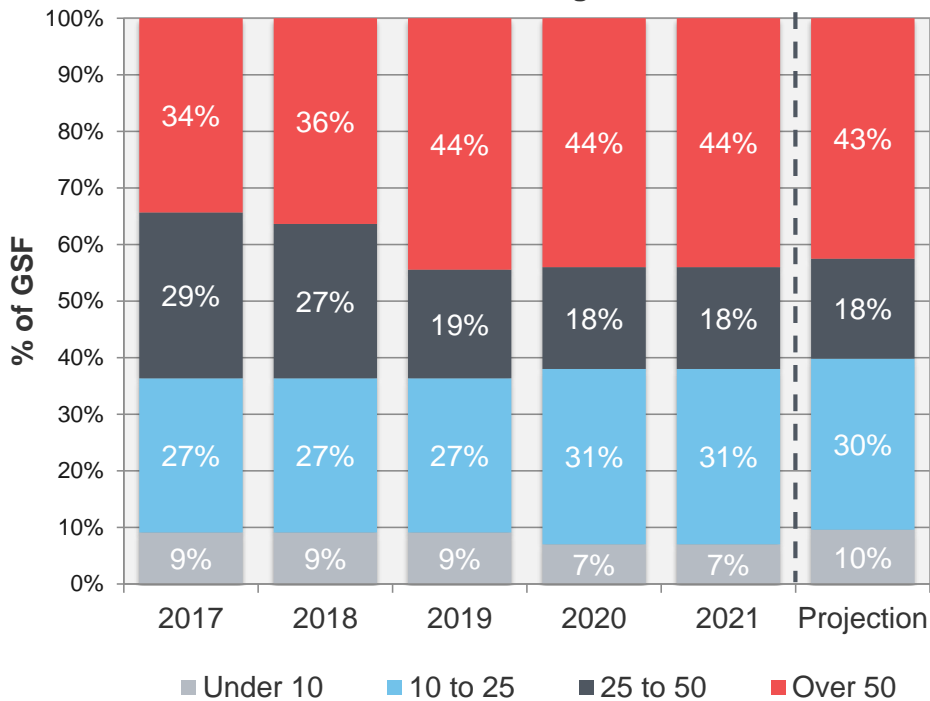
$$\text{Net Asset Value} = \frac{\text{Replacement Value} - \text{Backlog}}{\text{Replacement Value}}$$



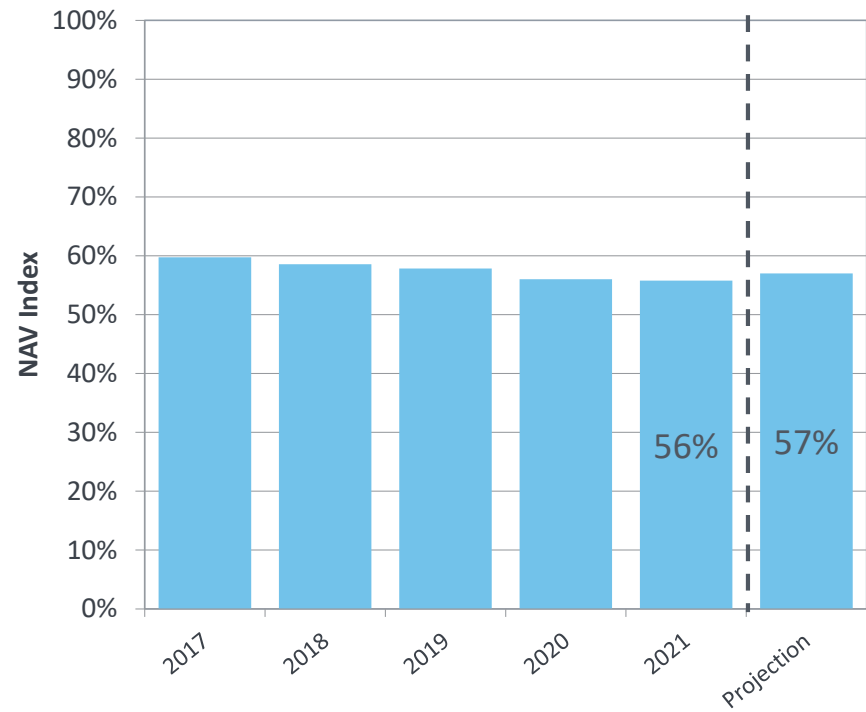
# Case Study: Fort Kent Enrollment and Advancement Center

Removing older spaces in addition to the new facility improves NAV and renovation age

Renovation Age



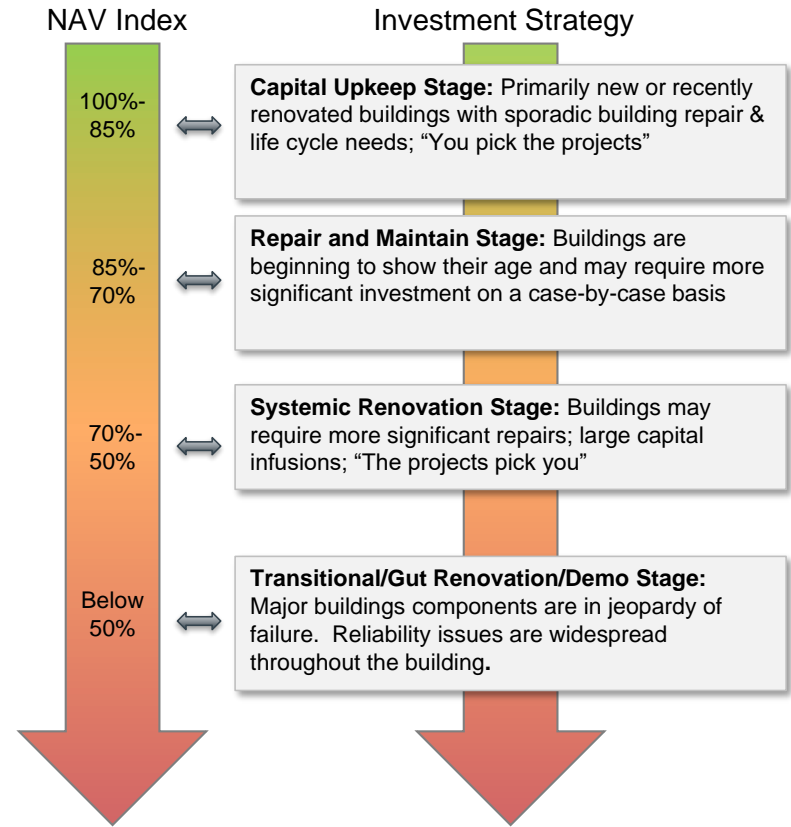
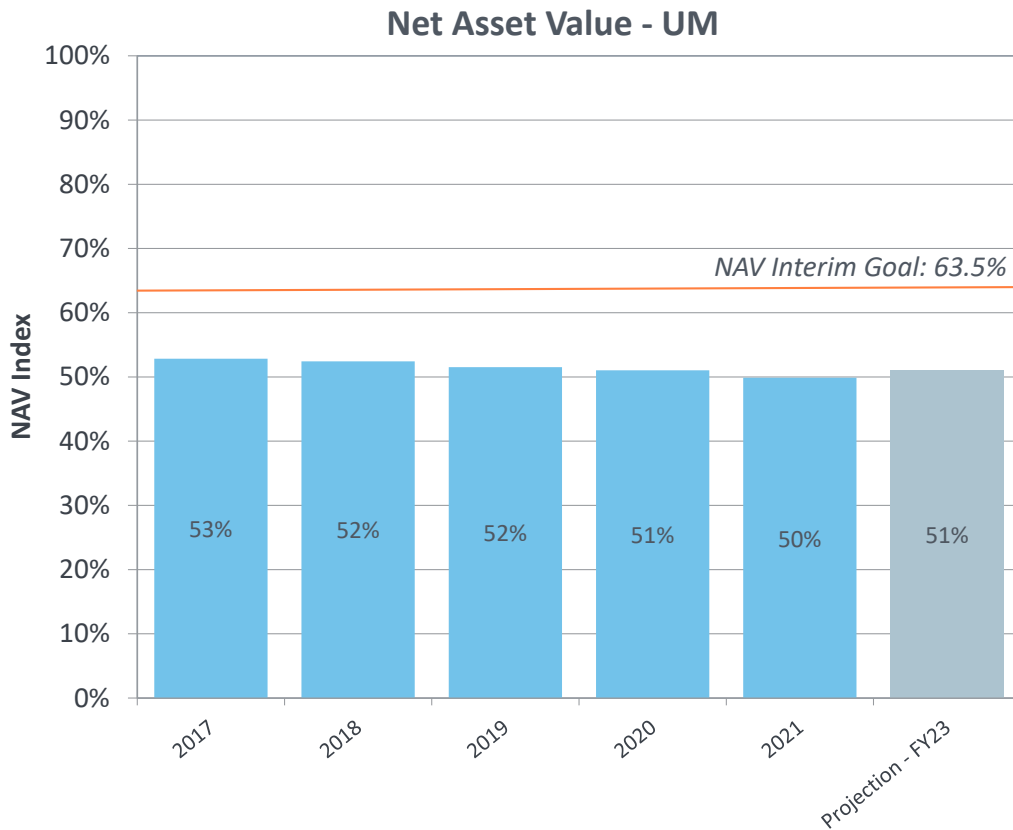
Net Asset Value



14.2



# Case Study: New Space Projected to Increase NAV @ UM



14.2



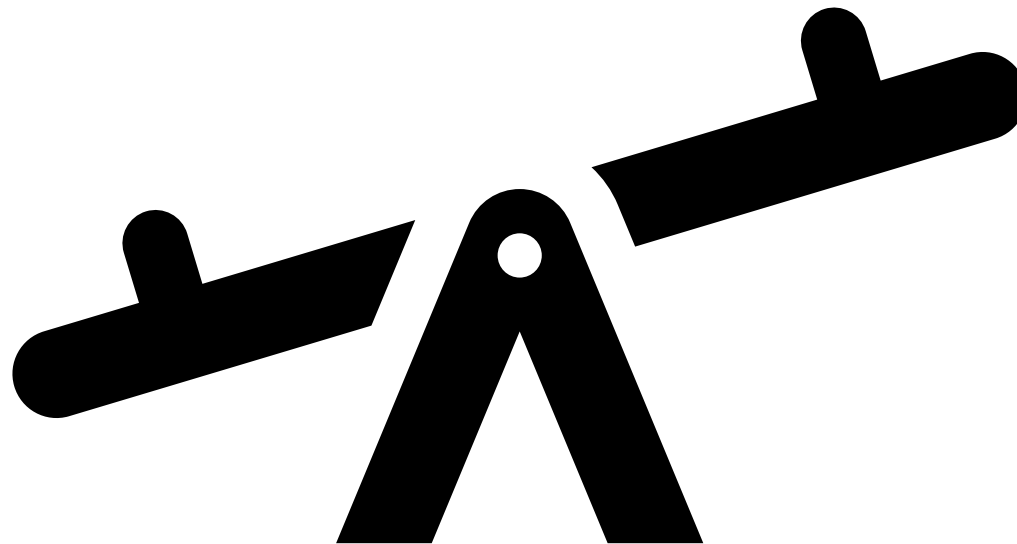
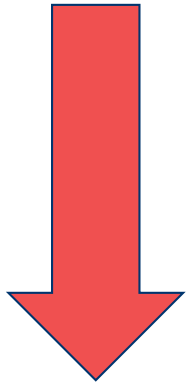
# Operations Success

14.2

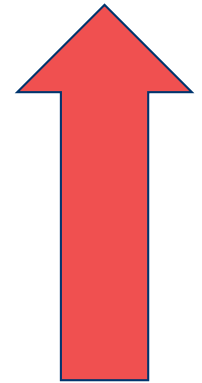
# Balancing Capital Projects With Daily Operations

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Capital Investment \$\$



Daily Operating \$\$



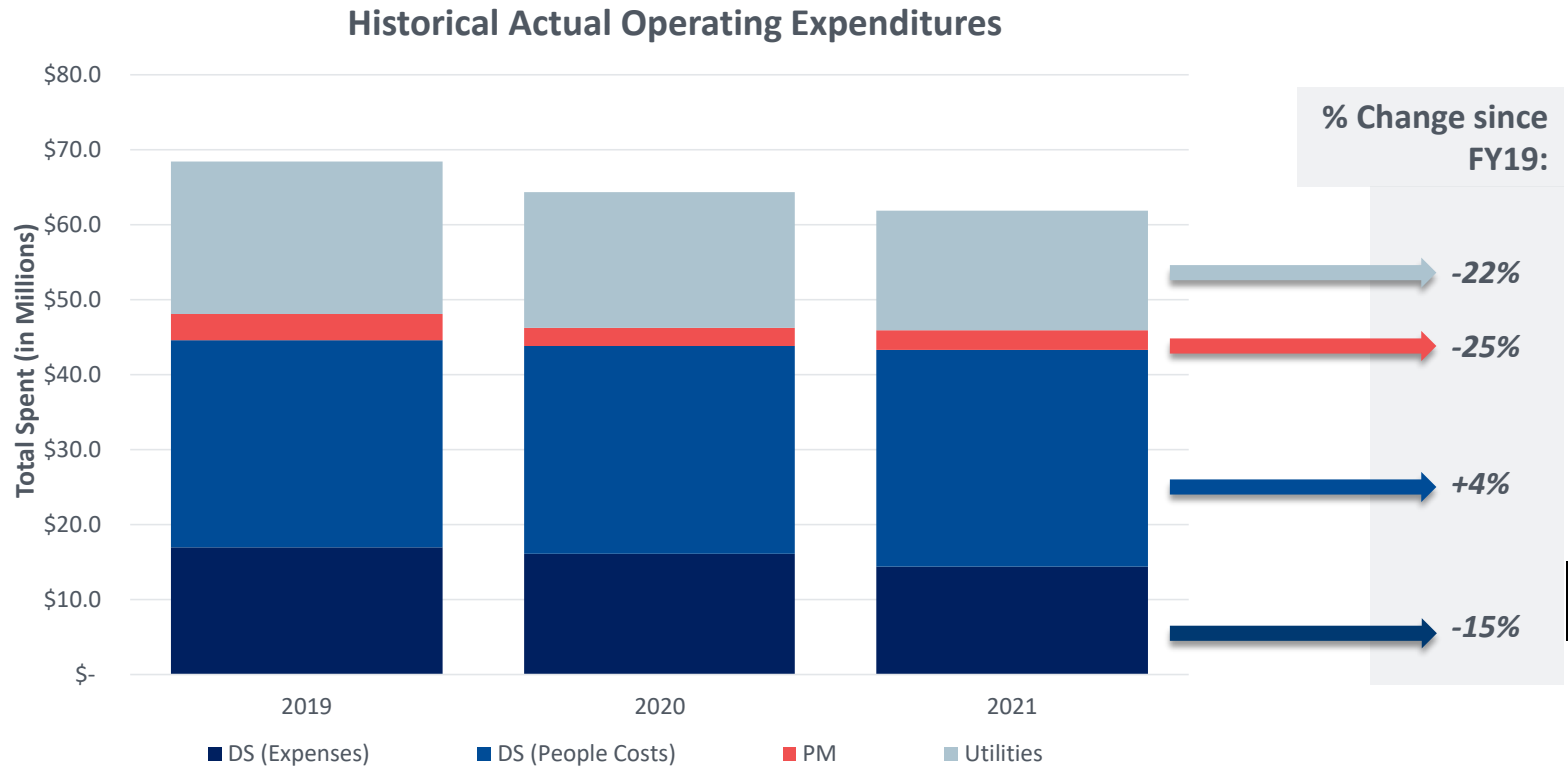
14.2

# Operating Actuals Decreasing Over Time

**Utilities**  
Fossil Fuel  
Electric  
Water/Sewer

**Planned Maintenance**  
Internal & outsourced  
work dedicated to  
extending lifecycles

**Daily Service**  
People costs,  
contracted services,  
materials



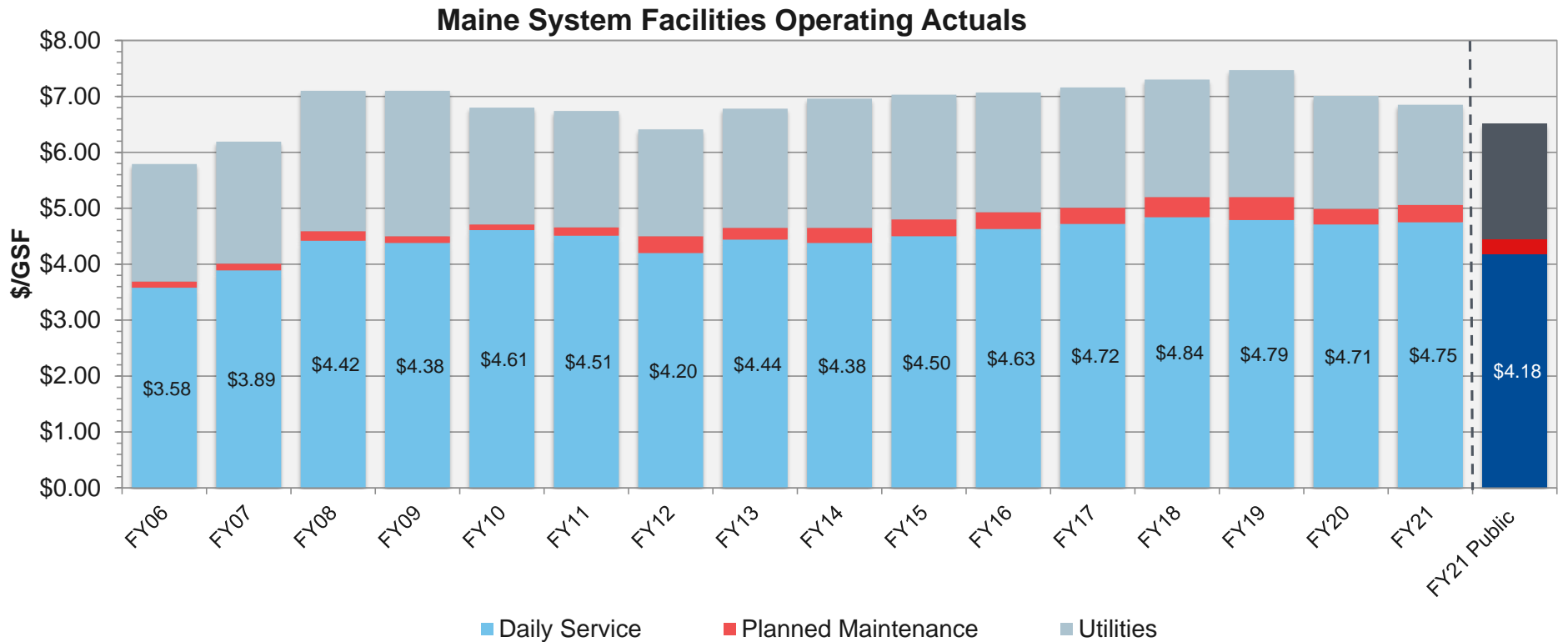
**14.2**



\*Operating budget does not include Covid-19 expenses  
 \*\*Utilities expenditures is a combination of consumption and unit costs

# COVID Continues to Impact Operating Budget

Utilities drive decrease in FY21



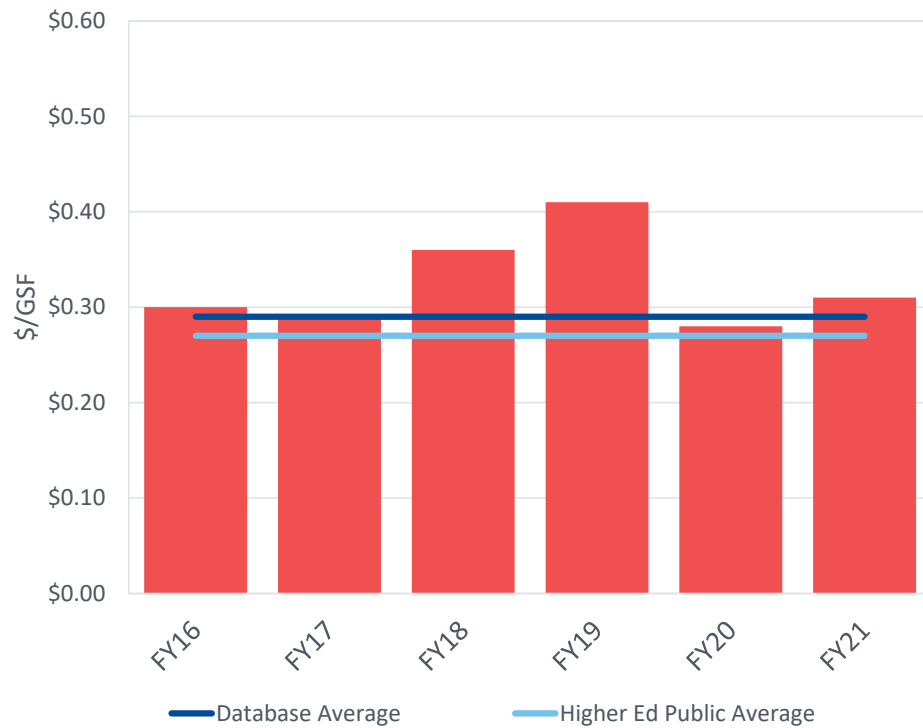
14.2

FY21 Public: Gordian Public Higher Ed. Database Average for FY2021

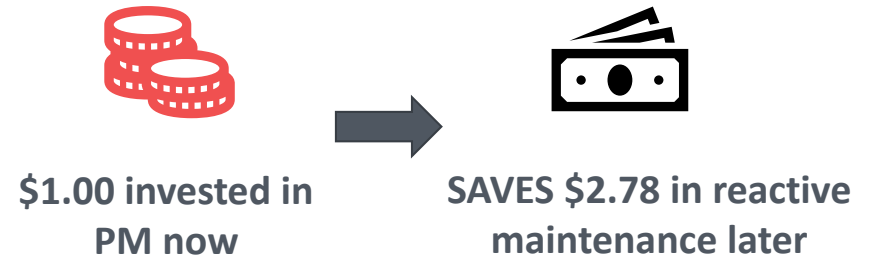
# Planned Maintenance Strategic Opportunities

AIM tracking can improve strategic PM investment

UMS Planned Maintenance Spending



## THEORY



**Strategic Deferral of PM**

- Usually in buildings/systems over 50 years old targeted for renovation or replacement
- Reallocates resources from the older buildings/systems to younger buildings and systems.
- Use Assessment in coordination with work order reporting to start identifying these opportunities.

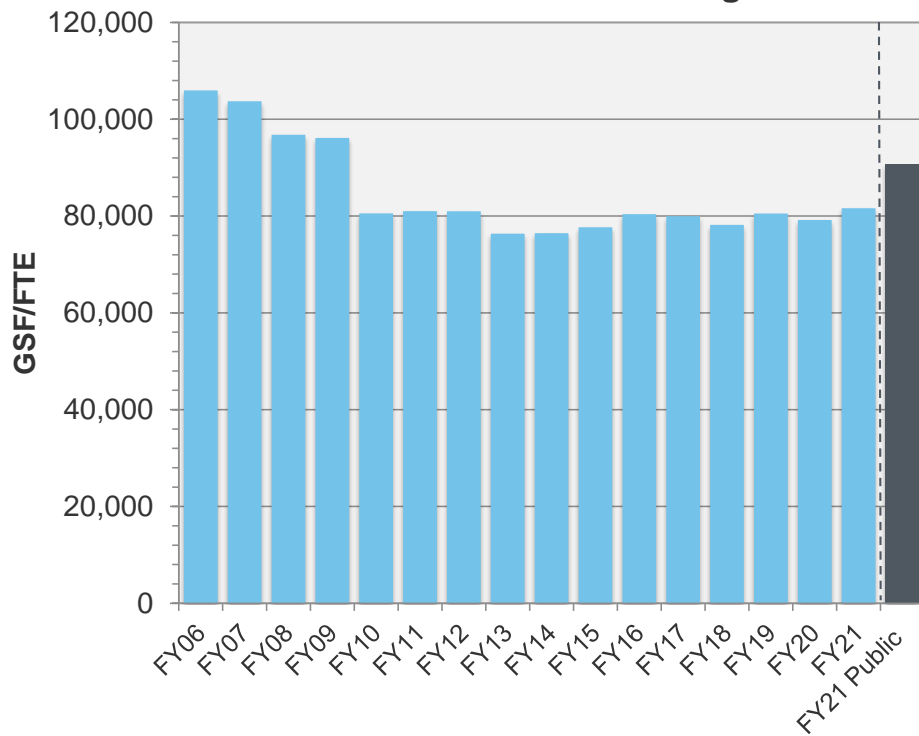
14.2



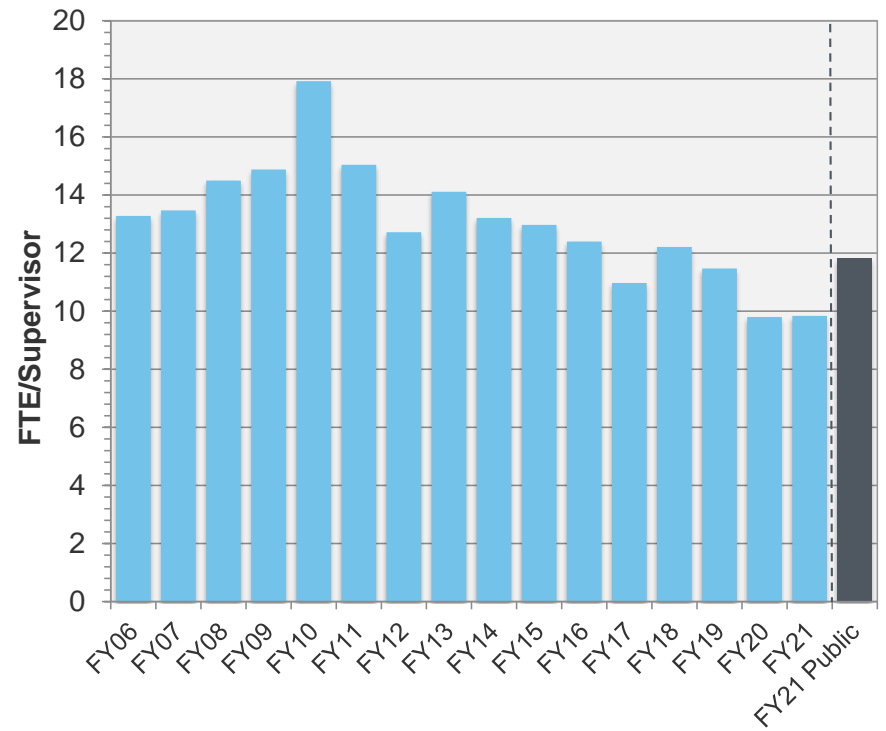
# Maintenance Operations

Staff covered less GSF/FTE, has more supervision to Public Higher Ed. in FY21

**Maintenance Staffing**



**Maintenance Supervision**

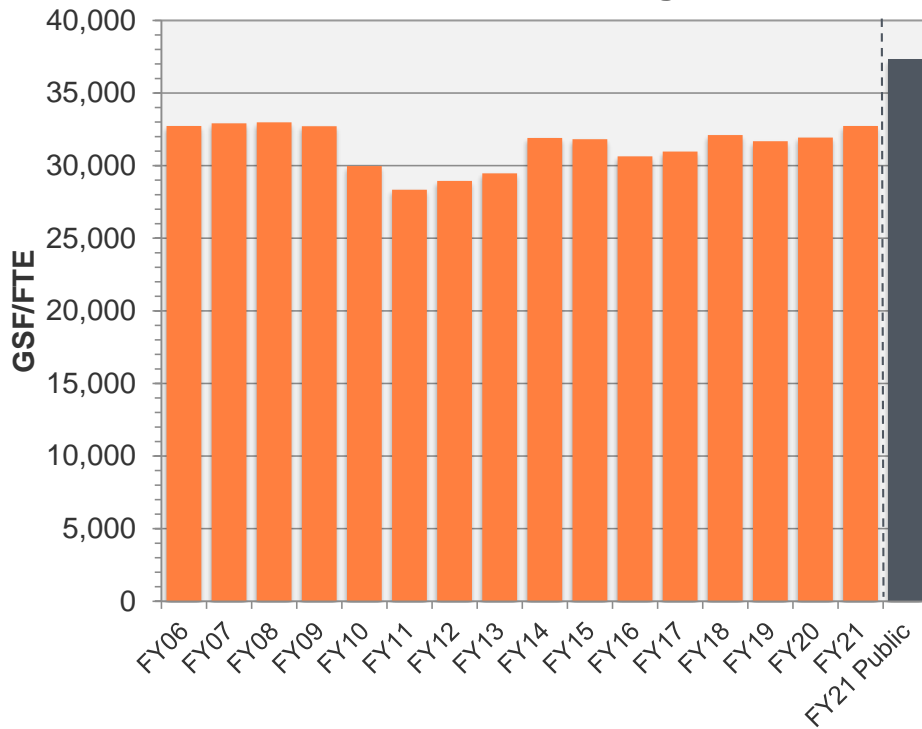


FY21 Public: Gordian Public Higher Ed. Database Average for FY21

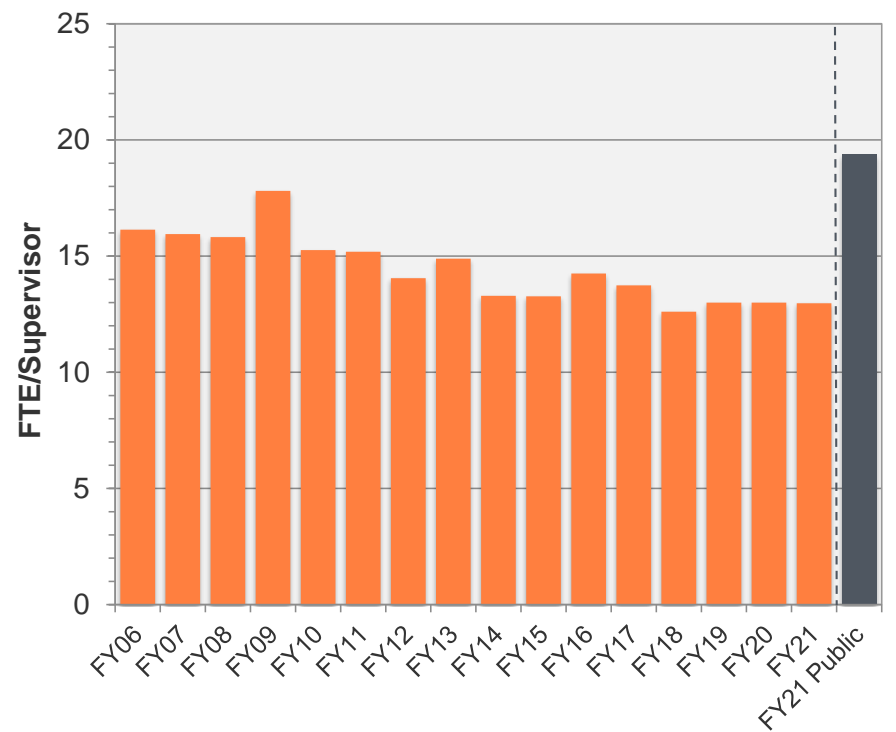
# Custodial Operations

UMS has more custodial staff with closer supervision than public school average

**Custodial Staffing**



**Custodial Supervision**

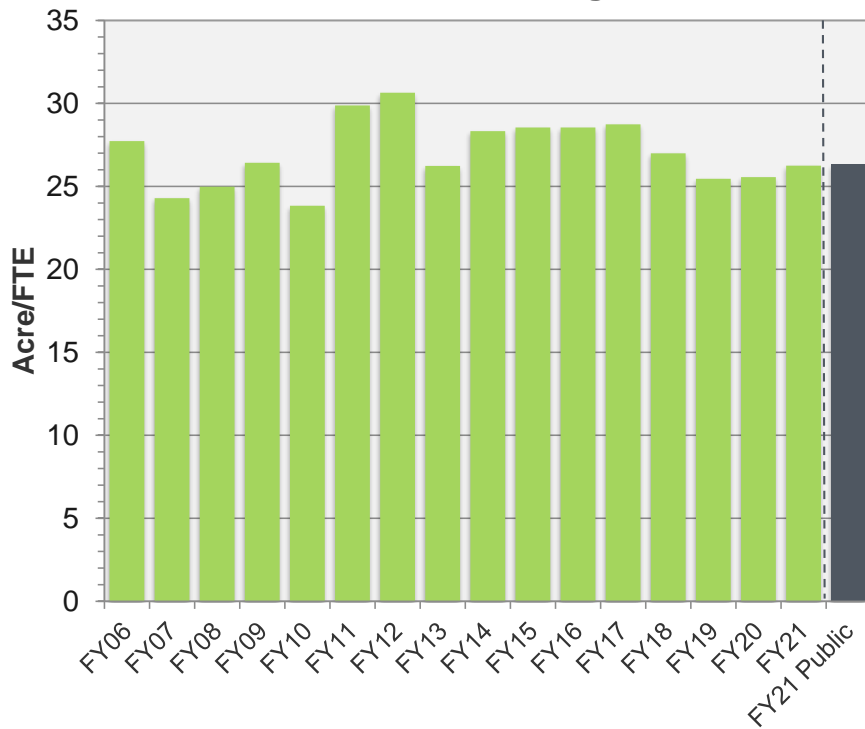


FY21 Public: Gordian Public Higher Ed. Database Average for FY21

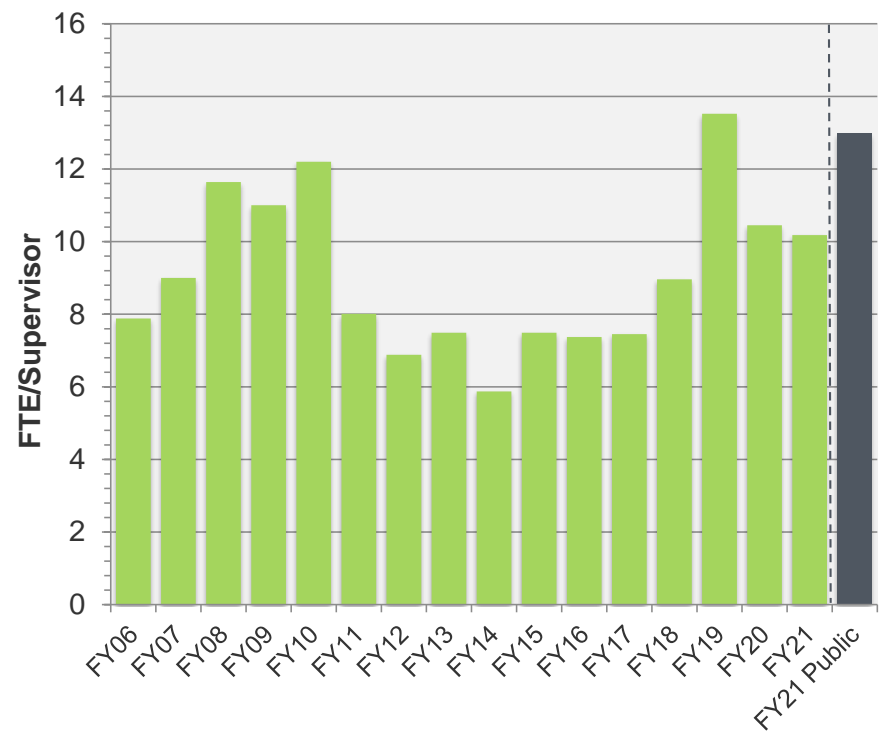
# Grounds Operations

Grounds staff responsible for similar acres as peers while being more closely supervised

**Grounds Staffing**



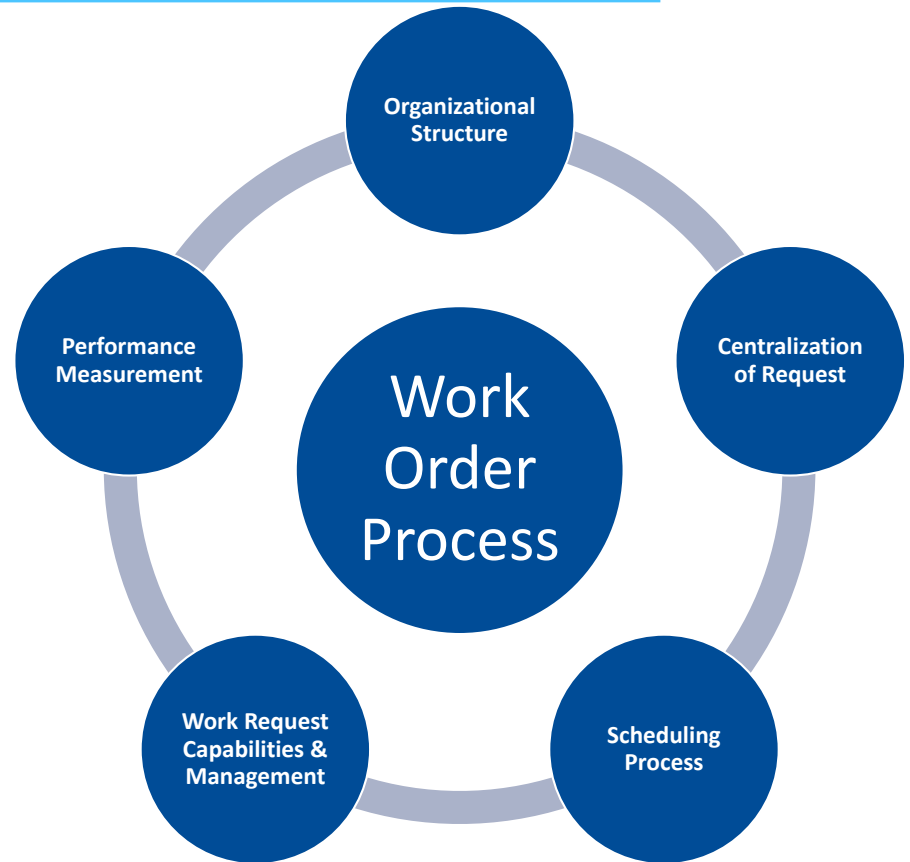
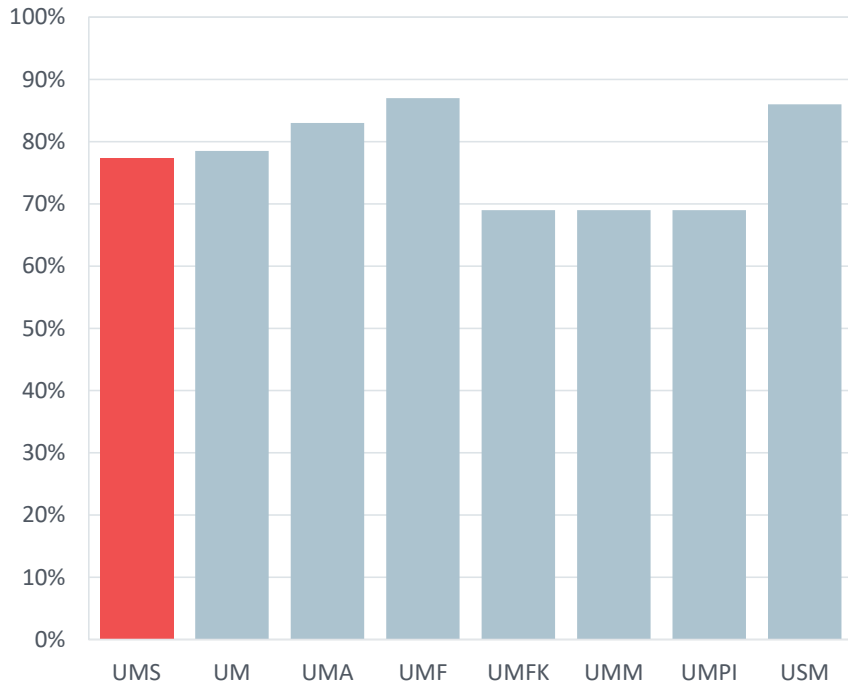
**Grounds Supervision**



FY21 Public: Gordian Public Higher Ed. Database Average for FY201

# AIM Boost Service Process Abilities Across the System

Work Order Process Scores



14.2

# Improving Scheduling, Services Levels, Reporting Mechanisms

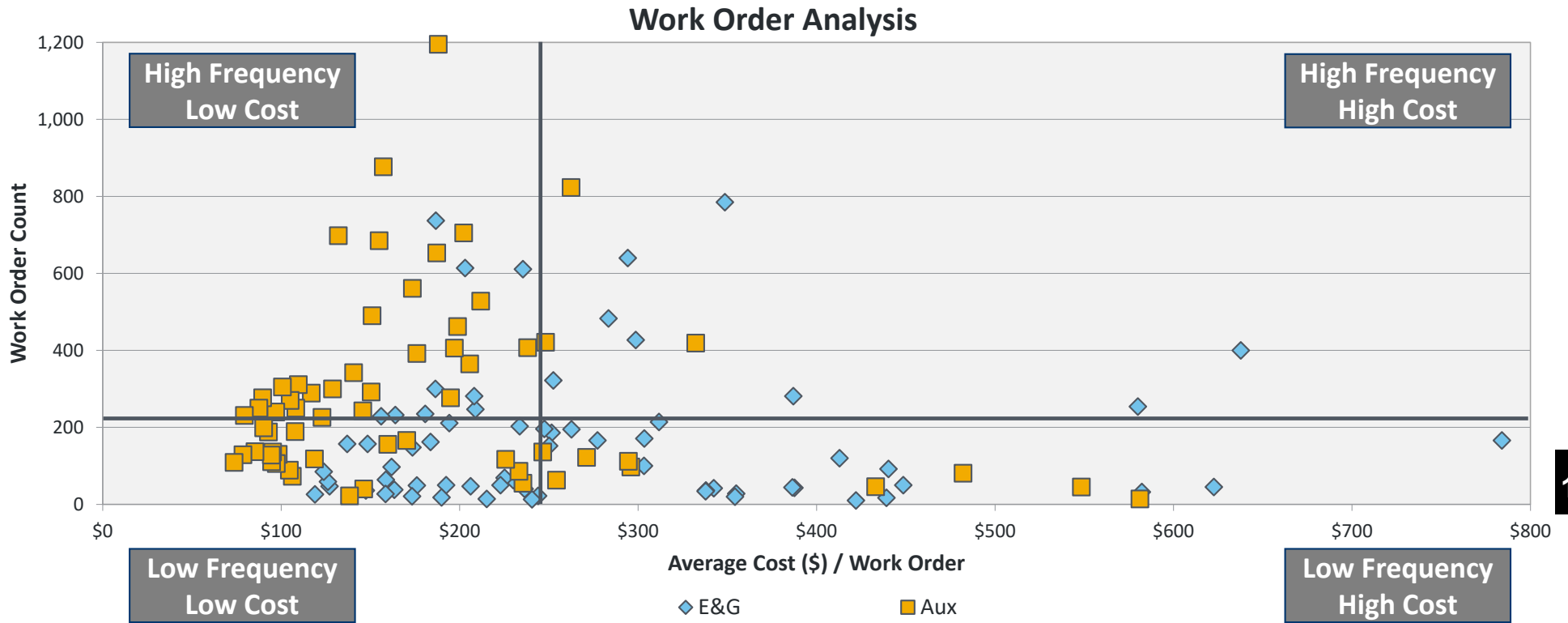
Scheduling Process	
	Service desk assigns priority
	Service desk assigns schedule
	Shop supervisor assigns personnel
	Schedules are communicated to the customer
	Changes in the schedule are communicated to the customer
	Customers can access the current status of work requests through a web-based system
	Changes to work request status are communicated to customer
	Customer satisfaction is surveyed after work request is completed
Work Request Capabilities & Management	
<b>Work Type</b>	System CAN track planned/preventive maintenance work requests
	System DOES track planned/preventive maintenance work requests
	System CAN track additional work request purposes (ie, emergency, vandalism, events, projects)
	System DOES track additional work request purposes (ie, emergency, vandalism, events, projects)
<b>Status</b>	System CAN track status of work request
	System DOES track status of work request
<b>Location</b>	System CAN track work request data by building
	System DOES track work request data by building
<b>Craft/Trade</b>	System CAN track work request data by craft/trade
	System DOES track work request data by craft/trade
<b>Transactions</b>	System CAN track labor hours to complete work request
	System DOES track labor hours to complete work request
	System CAN track labor costs
	System DOES track labor costs
	System CAN track material dollars
	System DOES track material dollars
	System CAN track costs for contracted maintenance services
	System DOES track costs for contracted maintenance services

*Difficult to do with standing work orders*

14.2

# Work Order Analysis – Sample Data

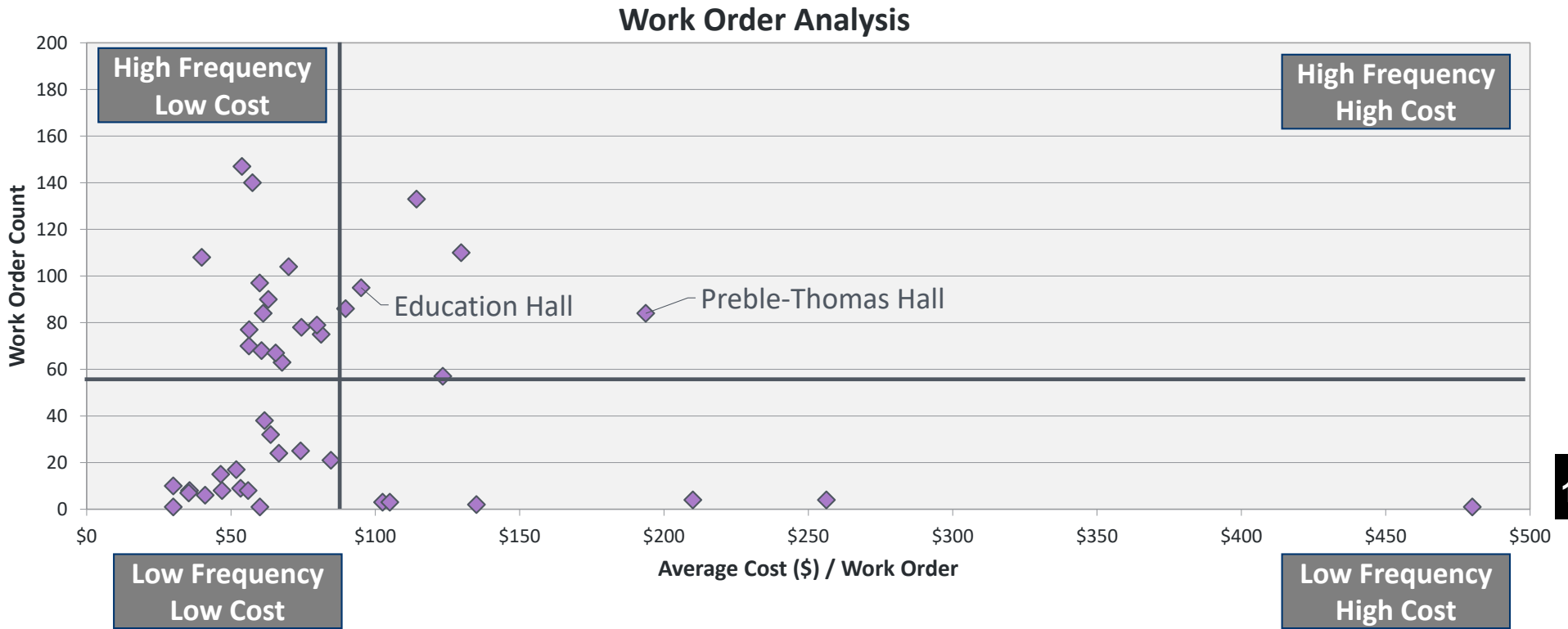
Using the work order system to understand demands of campus buildings



14.2

# Work Order Analysis – Farmington Example

Using the work order system to understand demands of campus buildings

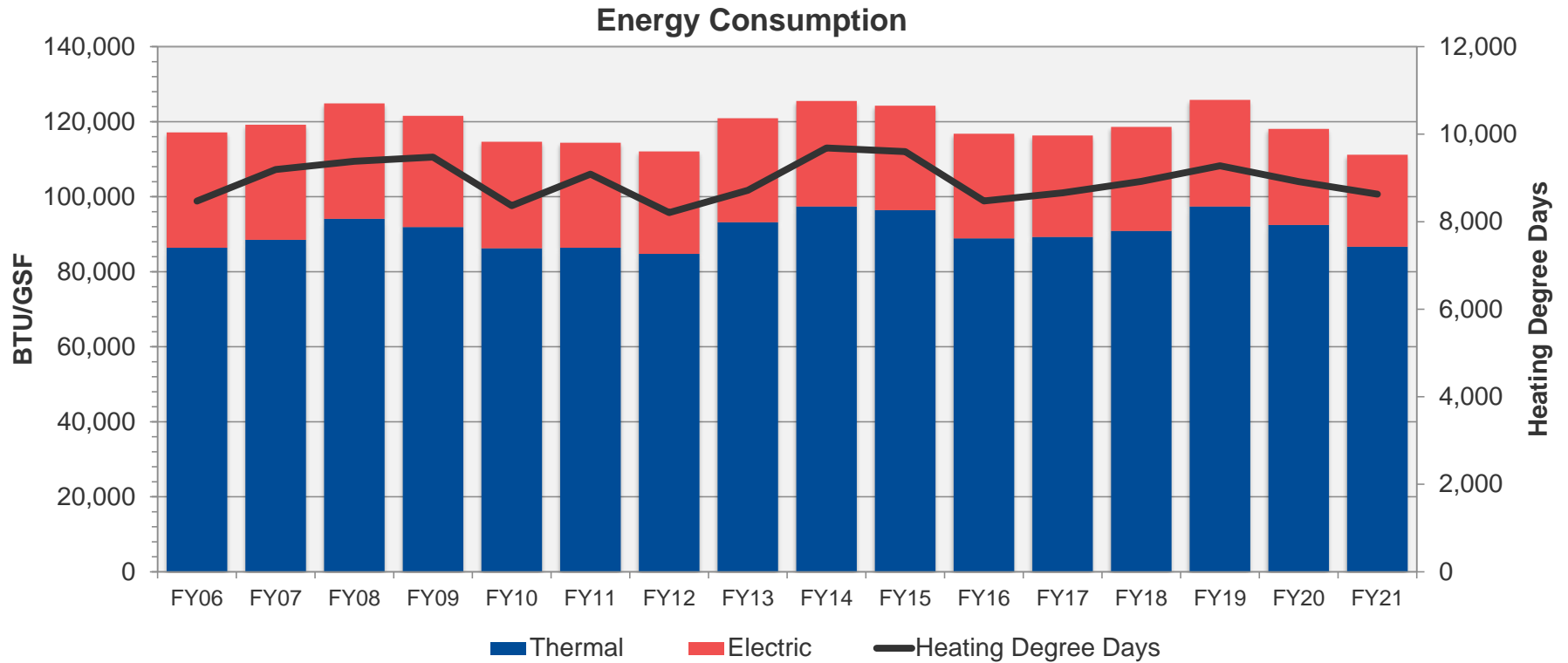


14.2

Average Frequency = 87 WO  
 Average Cost = \$59 / WO  
 59

# System Matches Performance to Weather and Avoids Waste

System continues downward trend



14.2

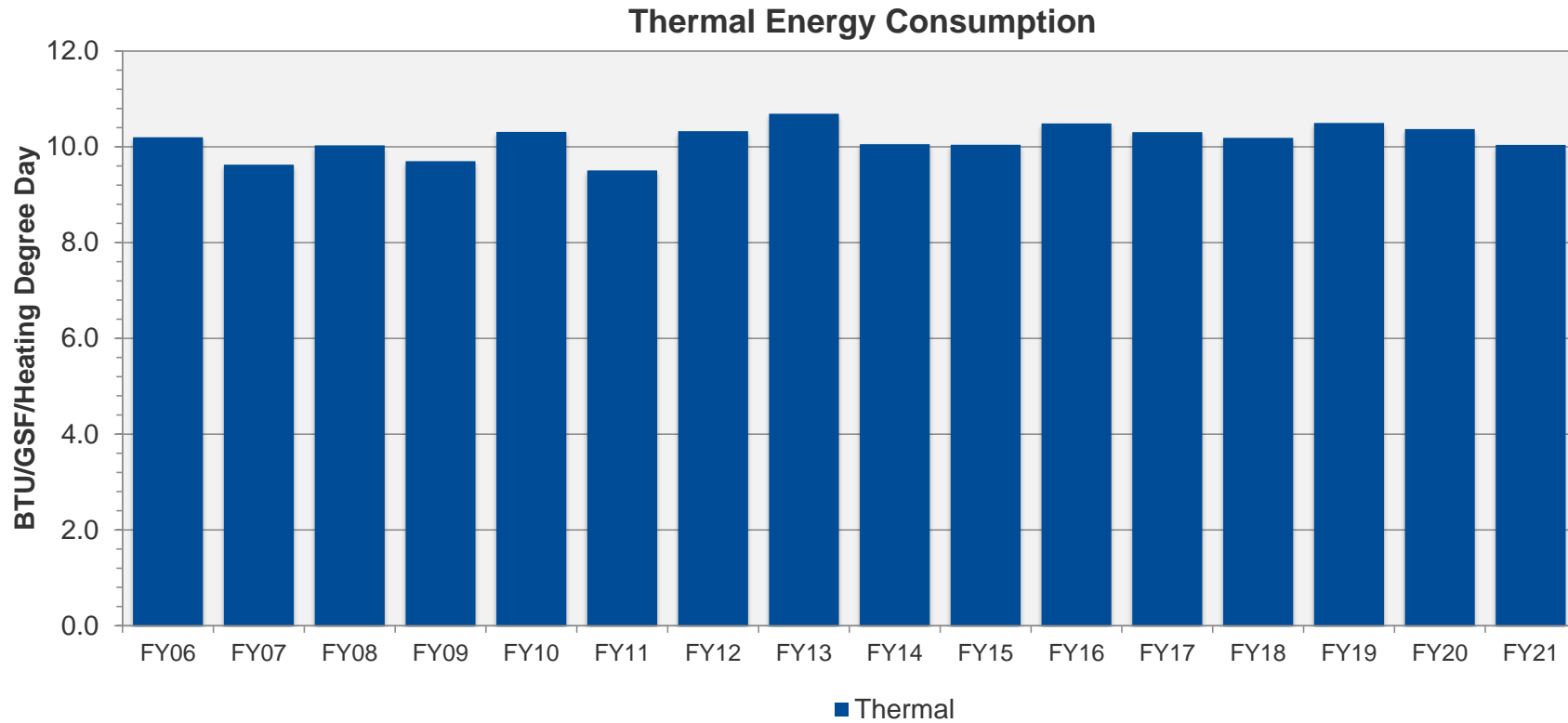
\*Degree days noted are based on the Orono, Maine location

\*\*Thermal contain all heating fuel sources, including alternative fuel sources (ie biomass, wood chips, etc.)





## System Matches Performance to Weather and Avoids Waste



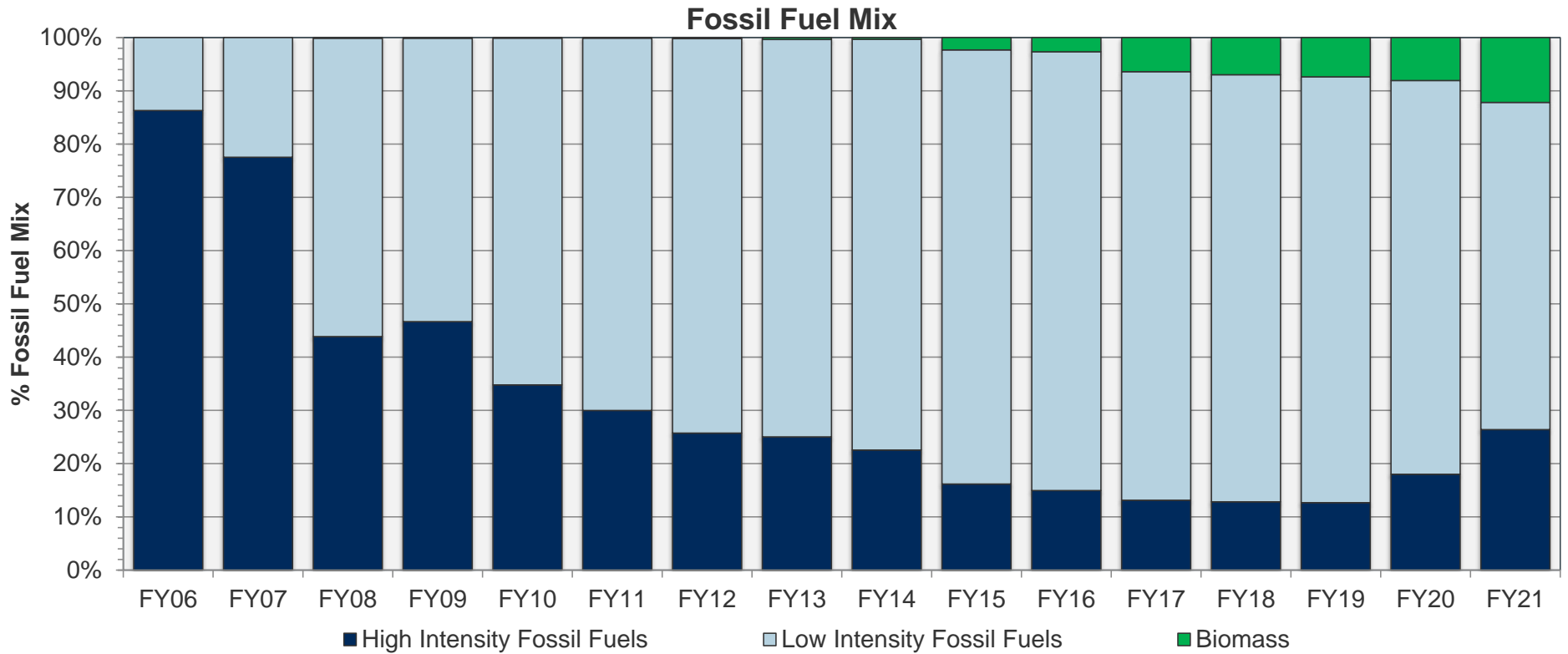
14.2

\*Degree days noted are based on the Orono, Maine location

\*\*Thermal contain all heating fuel sources, including alternative fuel sources (ie biomass, wood chips, etc.)

# High Intensity Fossil Increases as Low Intensity Decreases

UM need for oil drives up high intensity fossil usage



14.2

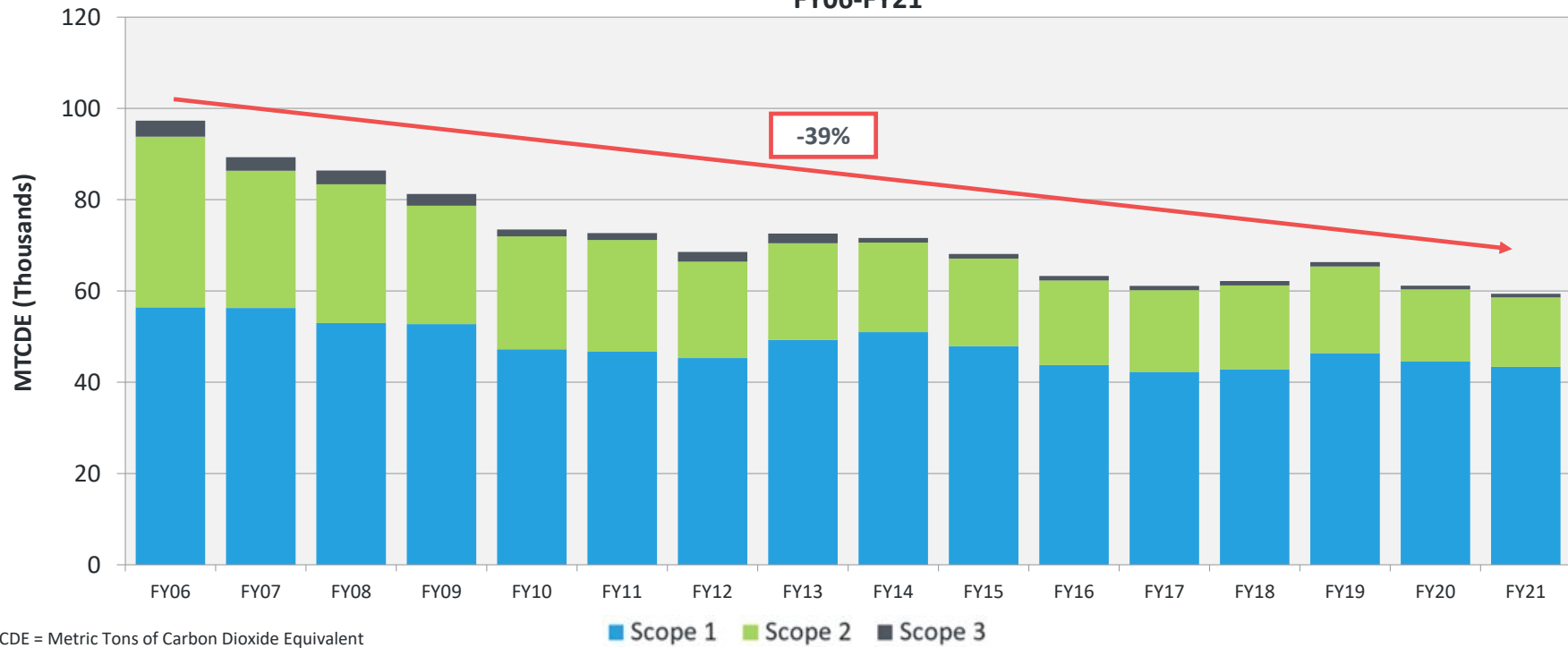
\*High intensity fuels include oil #2 and oil #6  
 \*\*Low intensity fuels include natural gas and propane



# Fuel Mix and Consumption Drive Emission Rates

Total gross emissions have decreased 39% since FY06

University of Maine System Total Gross Emissions  
FY06-FY21



14.2

MTCDE = Metric Tons of Carbon Dioxide Equivalent

■ Scope 1 ■ Scope 2 ■ Scope 3



# Concluding Comments

14.2

# Key Takeaways

---

## SUCCESSES

- Campus footprints are stable. New space offset by older GSF taken offline. Strategic planning includes effectively supporting new space. Not “making the problems greater.”
- Continue to incentivize space removal. To see progress in this area, larger buildings will need to be considered. Campus constituents need to understand short term inconveniences will achieve longer term improvements.
- The work control center and AiM data provides the opportunity to pinpoint where operational resources are being dedicated. This information can be used to focus capital investment and ultimately free up operating dollars.

## CONTINUED CHALLENGES

- Campus is aging. UMS will need \$45-\$60M each year to slow the aging process and mitigate deferred maintenance. How can UMS incrementally grow investment to these levels for existing space while supporting the record levels of investment happening over the coming years?
- To reverse the aging process and begin to increase Net Asset Value within the System inventory, campuses can:
  1. Remove space
  2. Utilize renovation through replacement strategy
  3. Add new construction GSF
- Space/Student FTE remains higher to peers. Removing space from the inventory will improve density and enhance utilization of space at the campuses. To date only a small portion of overall GSF has been removed.

14.2



# System Strategies

Approach	Impact to KPIs	Challenges
Removal of (older/high need) space	Eliminates backlog of need if buildings are older Increases NAV Decrease % of space over 50 years old	Reallocation of programs Cost of demolitions
Utilize renovation through replacement strategy	Eliminates backlog of need if buildings are older Increases NAV Decrease % of space over 50 years old	Cost of demolitions Cost of construction Length of process
Add new construction GSF	Artificially increases NAV in the short term Decrease % of space over 50 years old Draw new students to campuses but increase in FTEs might not overcome additional GSF to increase density	Cost of construction Length of process Expands operating resources required in the future

**Gordian Recommendations:**

- *Although adding new construction (additional GSF) to campuses is a strategy some institutions take, Gordian does not recommend this approach for the UMS. Resources are limited, and opportunity exists to increase utilization rates with current footprint.*
- *Figure out how to incentivize space removal. To see progress in this area, larger buildings will need to be considered. Campus constituents need to understand short term inconveniences will achieve longer term improvements.*
- *Movement within Systemwide KPIs are difficult to obtain. Consider institution KPIs to understand specific resources needed and see progress.*

# Questions and Comments

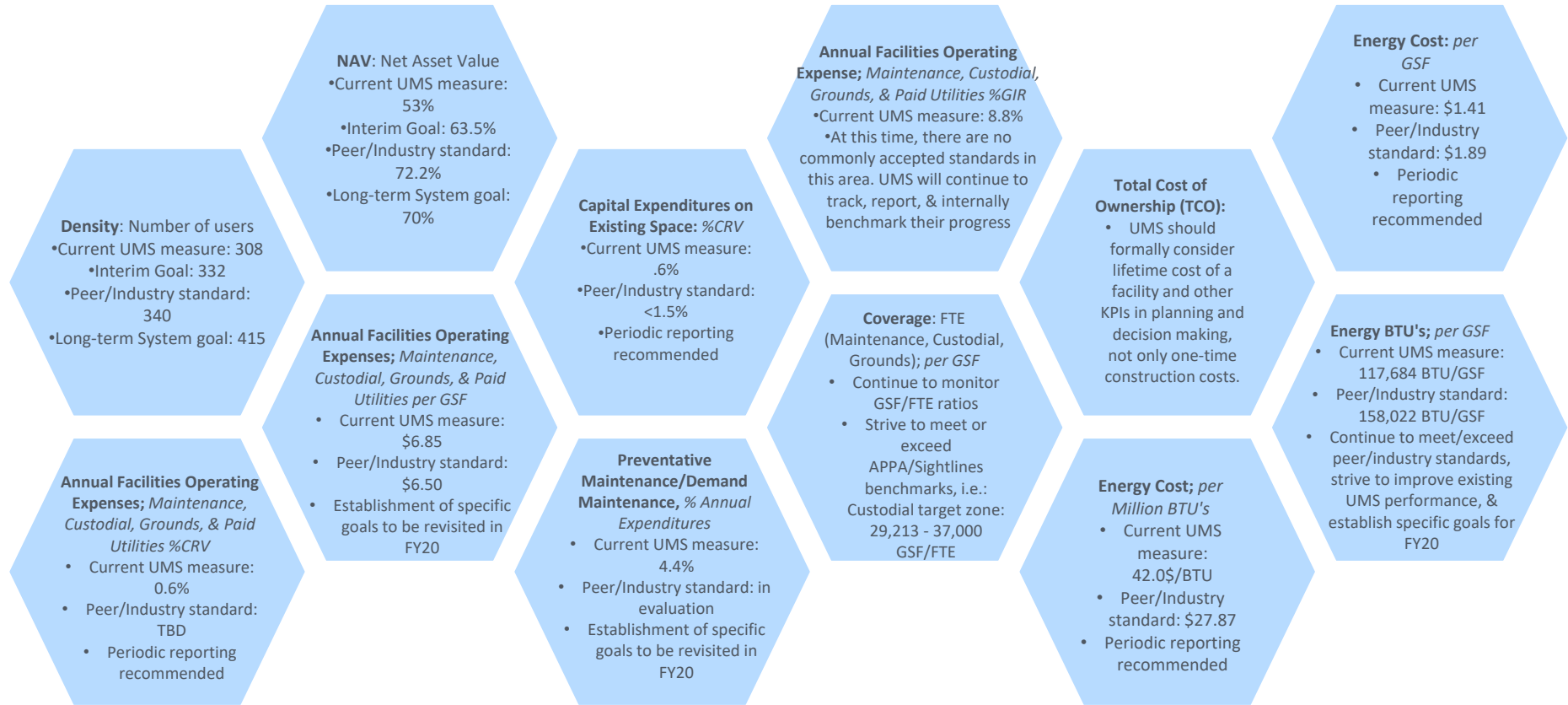
14.2

# Appendix: UMS Key Performance Indicators

14.2

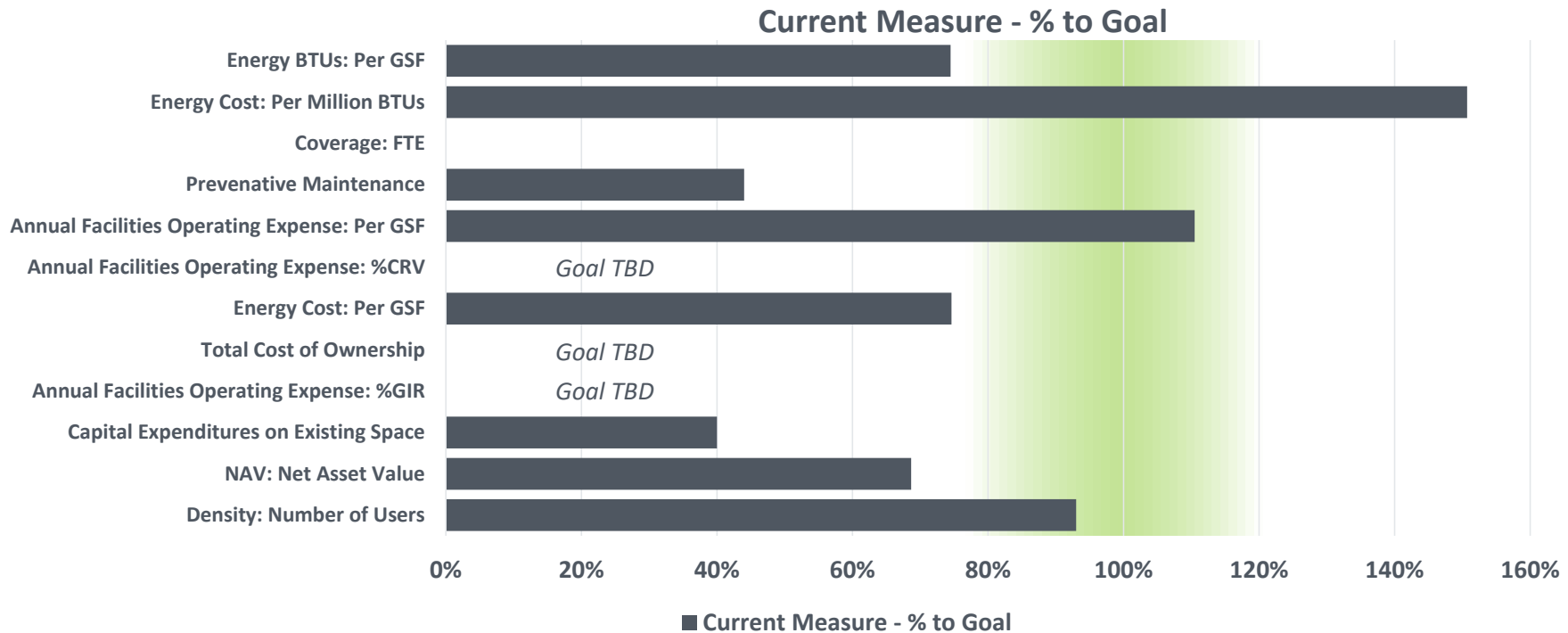


# Using Sightlines Data to Monitor UMS KPIs



# Using Sightlines Data to Monitor UMS KPIs

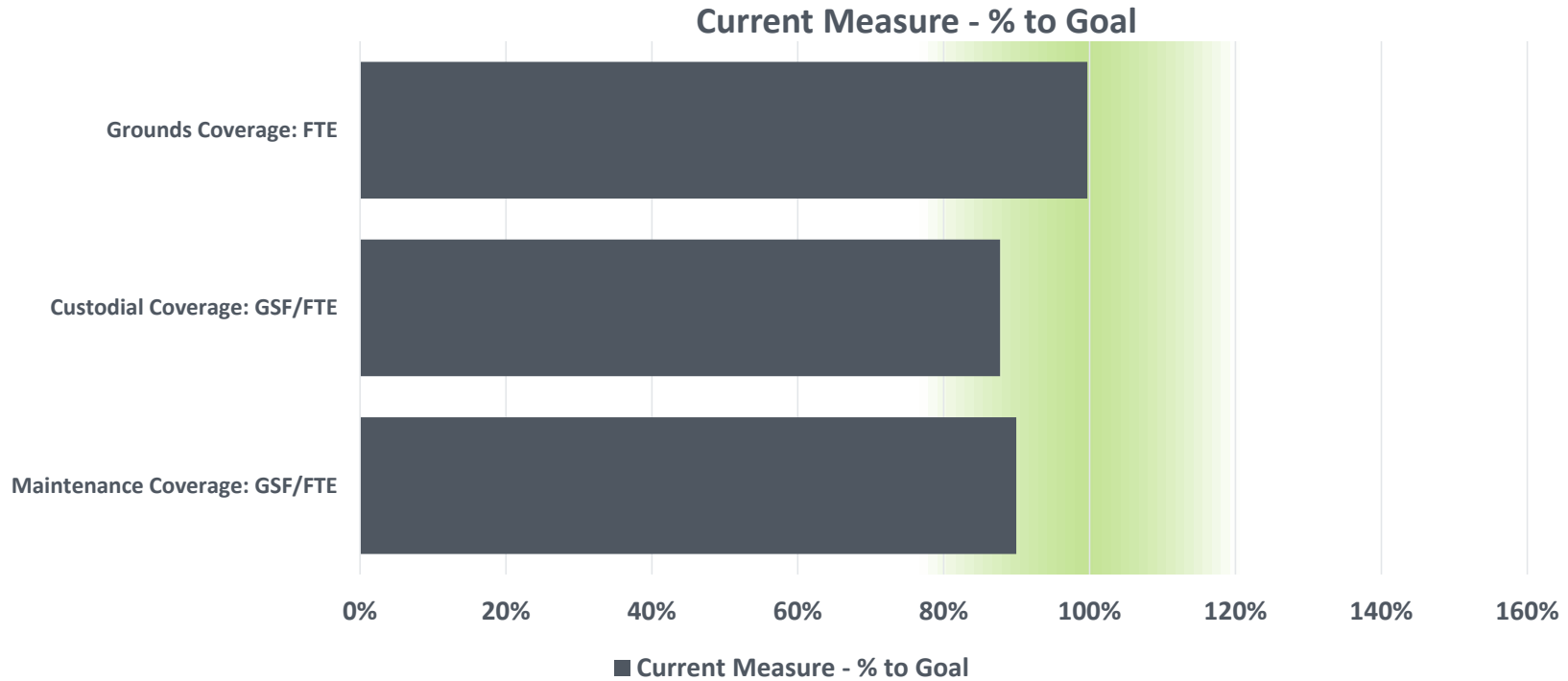
Measures normalized as % to goal



14.2

## Using Sightlines Data to Monitor UMS KPIs - Coverage

Coverage ratios measured normalized as % to goal

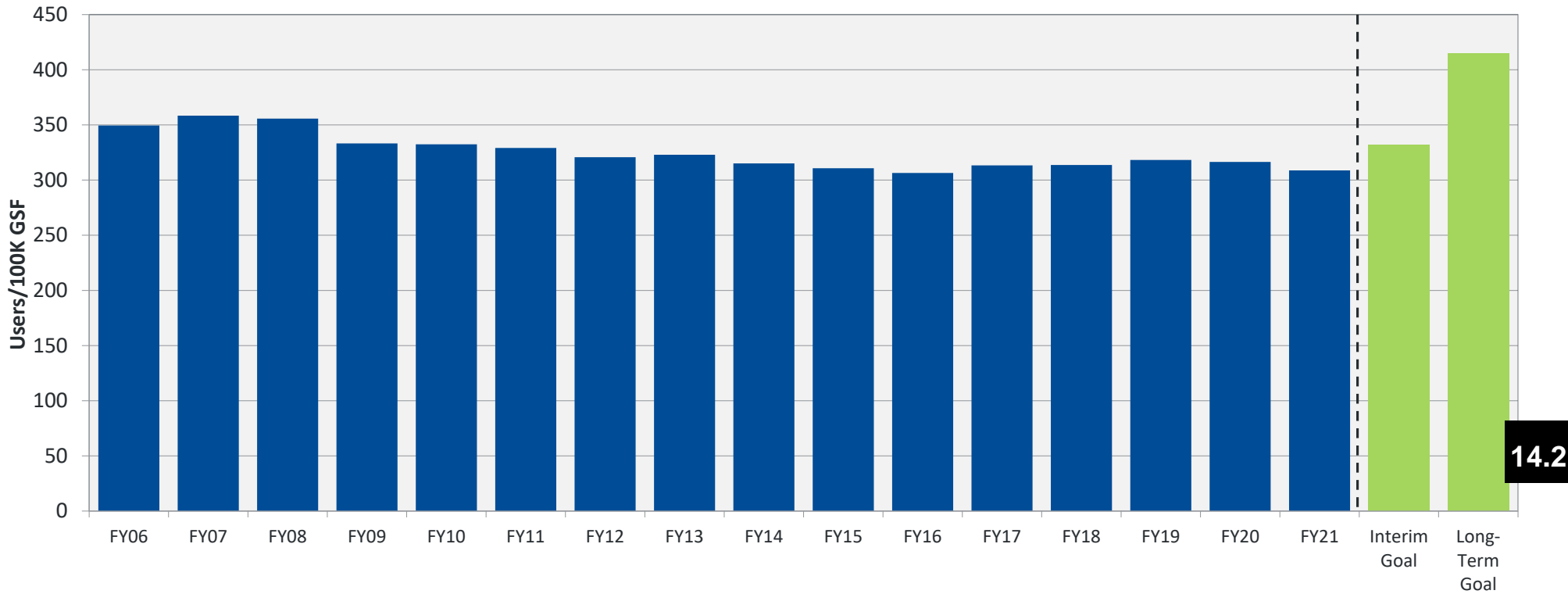


14.2

# Density Factor

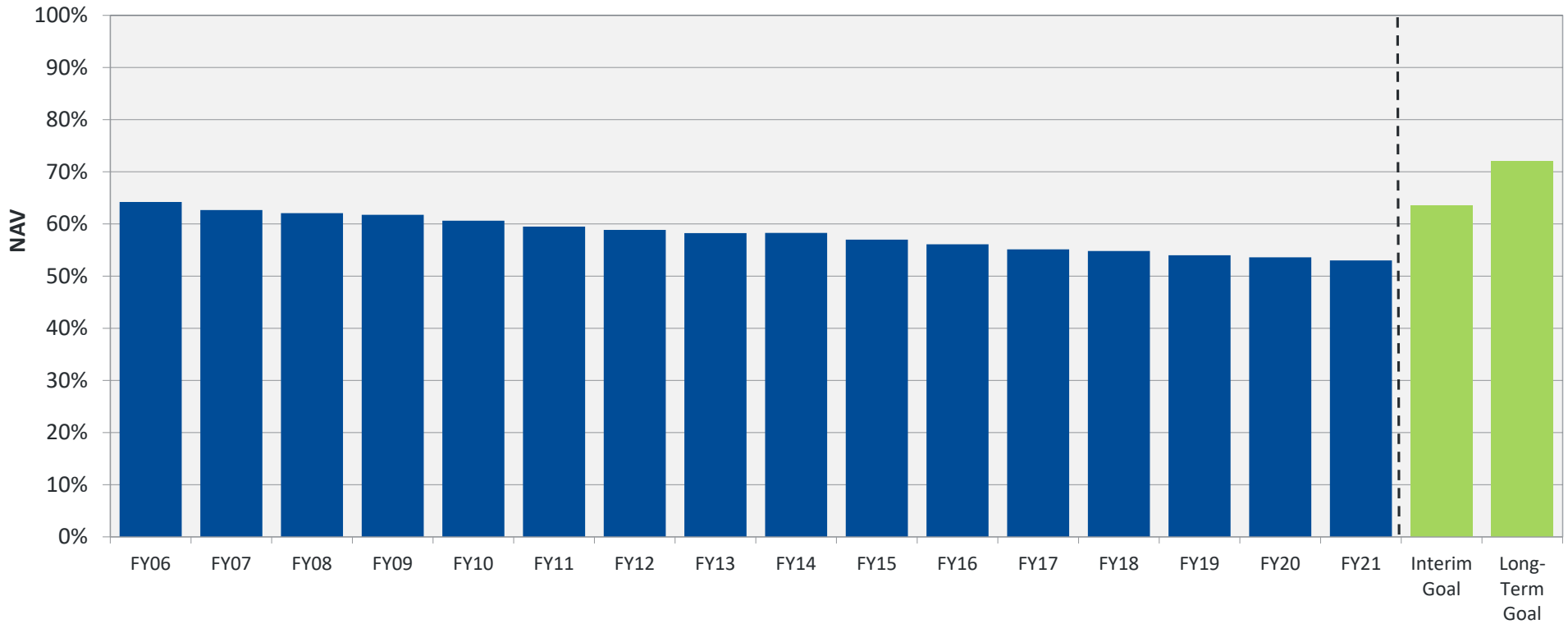
Density: Measures number of users per 100,000 GSF

Density Factor



# Net Asset Value

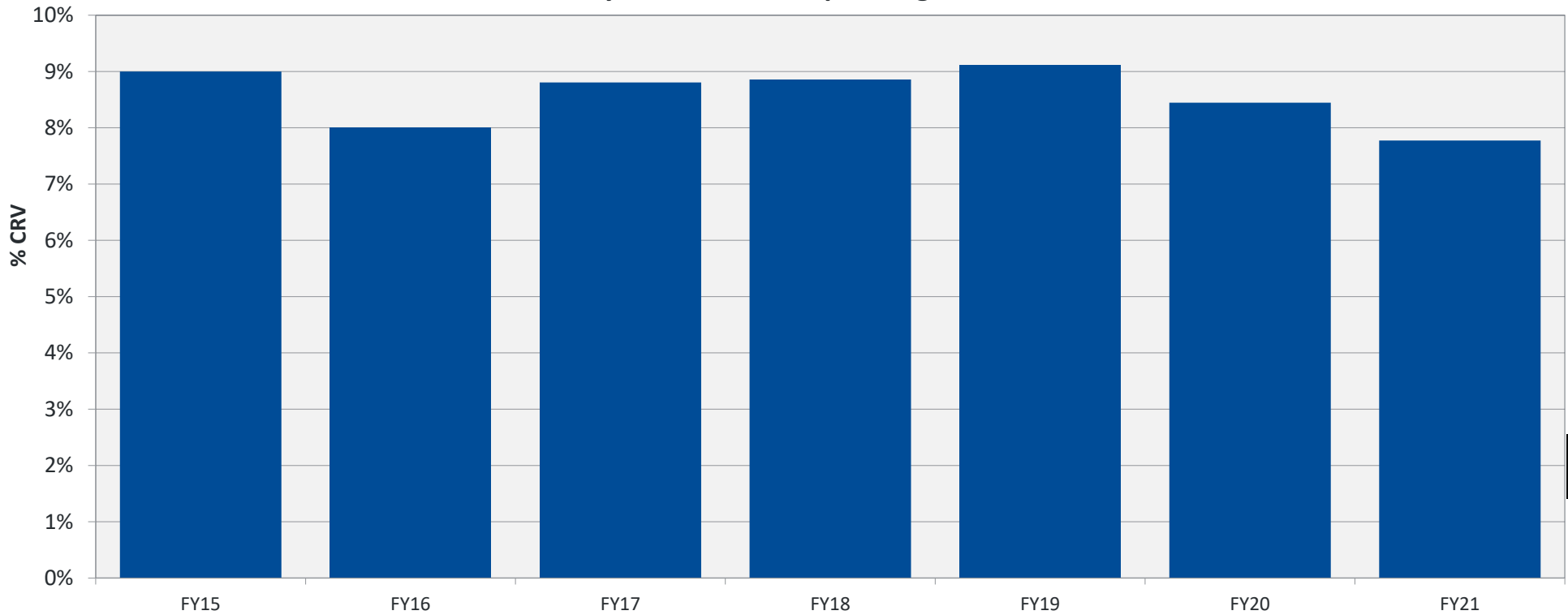
Net Asset Value



14.2

# Facilities Operating Actuals as % of GIR

Maine System Facilities Operating Actuals - %GIR

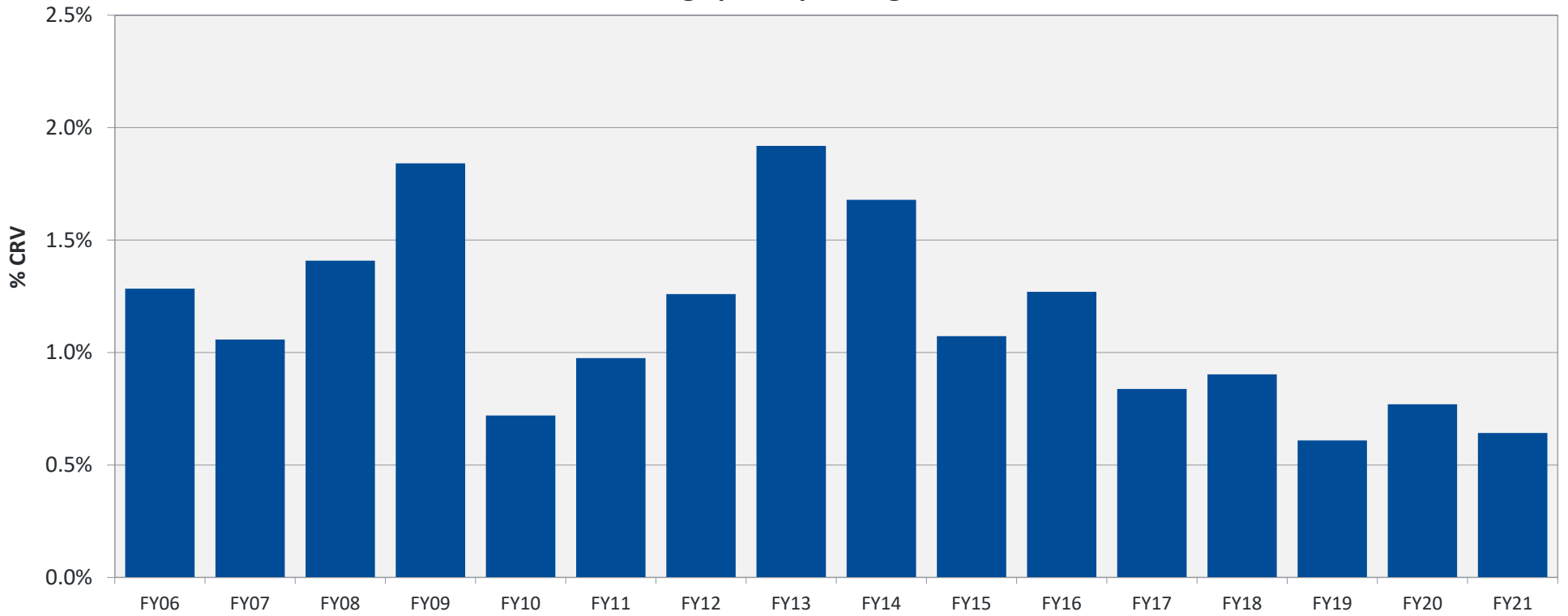


14.2

# Capital Spending - % CRV

Existing space investment only

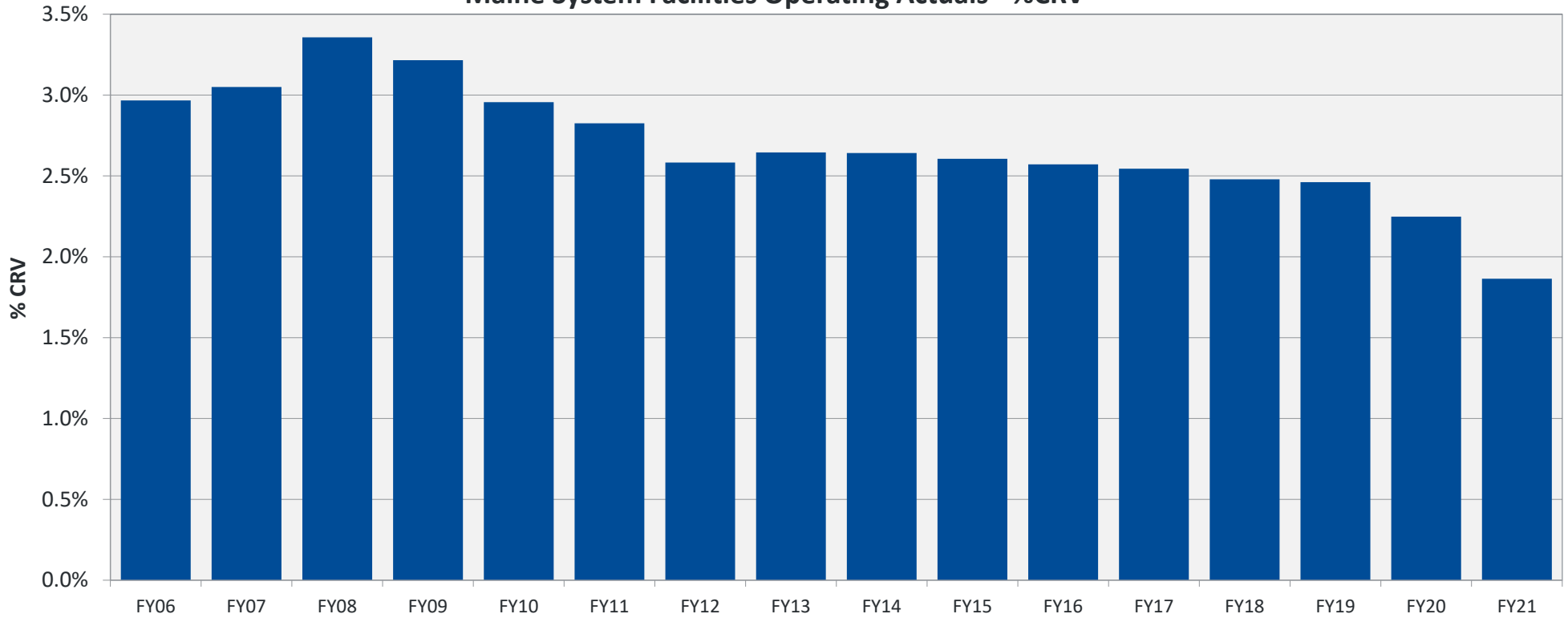
Existing Space Spending - % CRV



14.2

# Facilities Operating Actuals as % of CRV

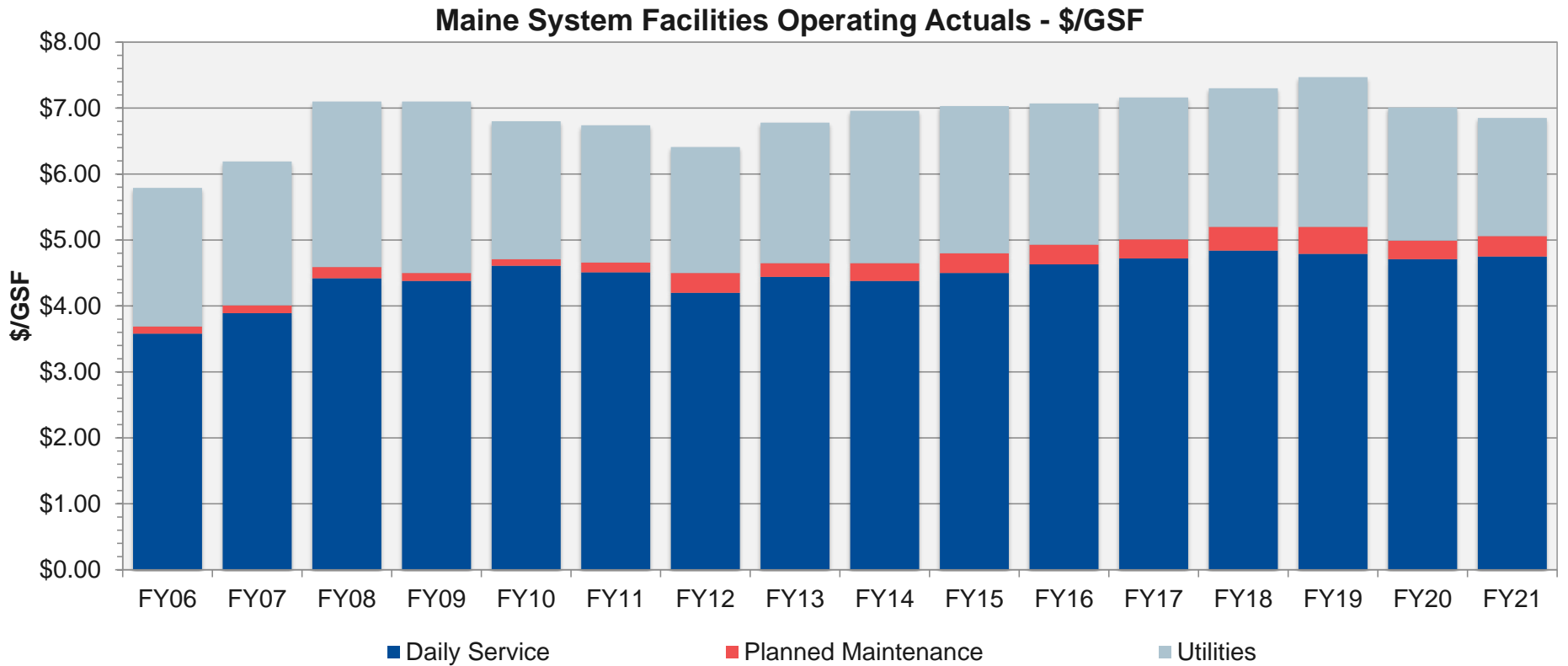
Maine System Facilities Operating Actuals - %CRV



14.2

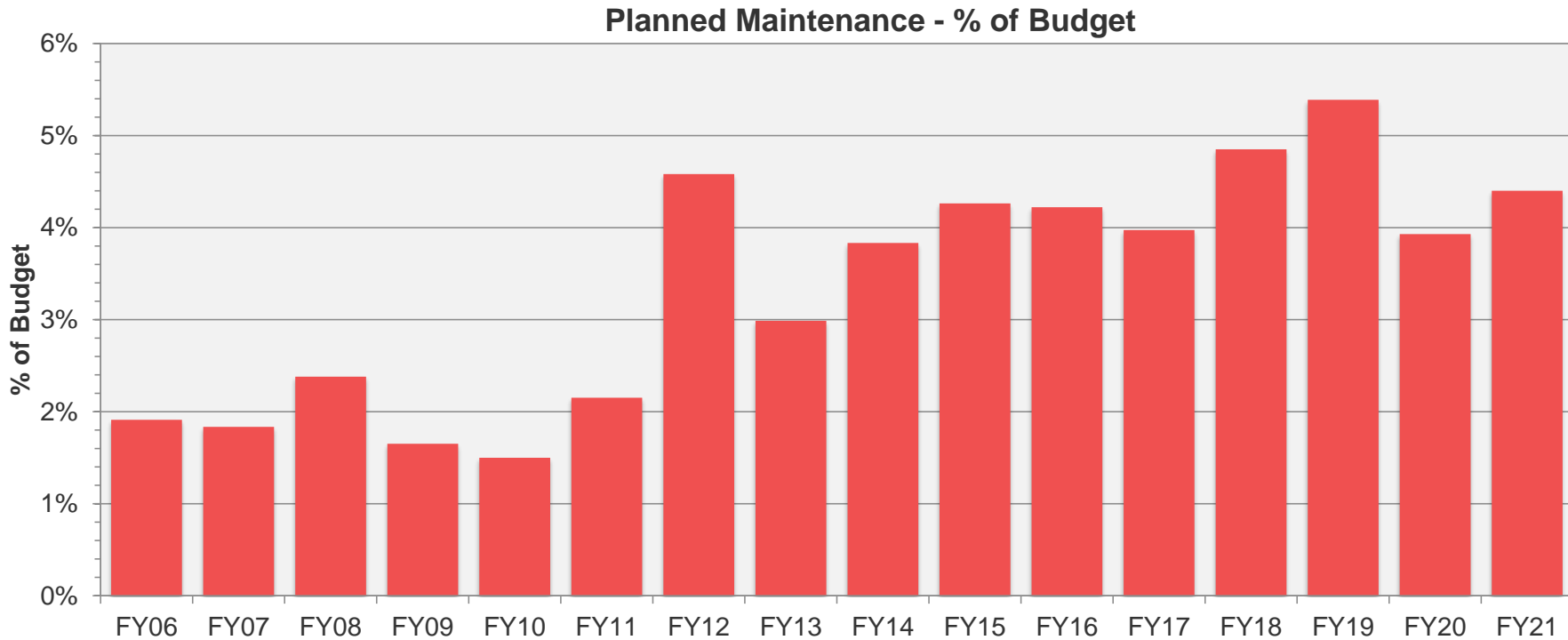


# Facilities Operating Budget Actuals



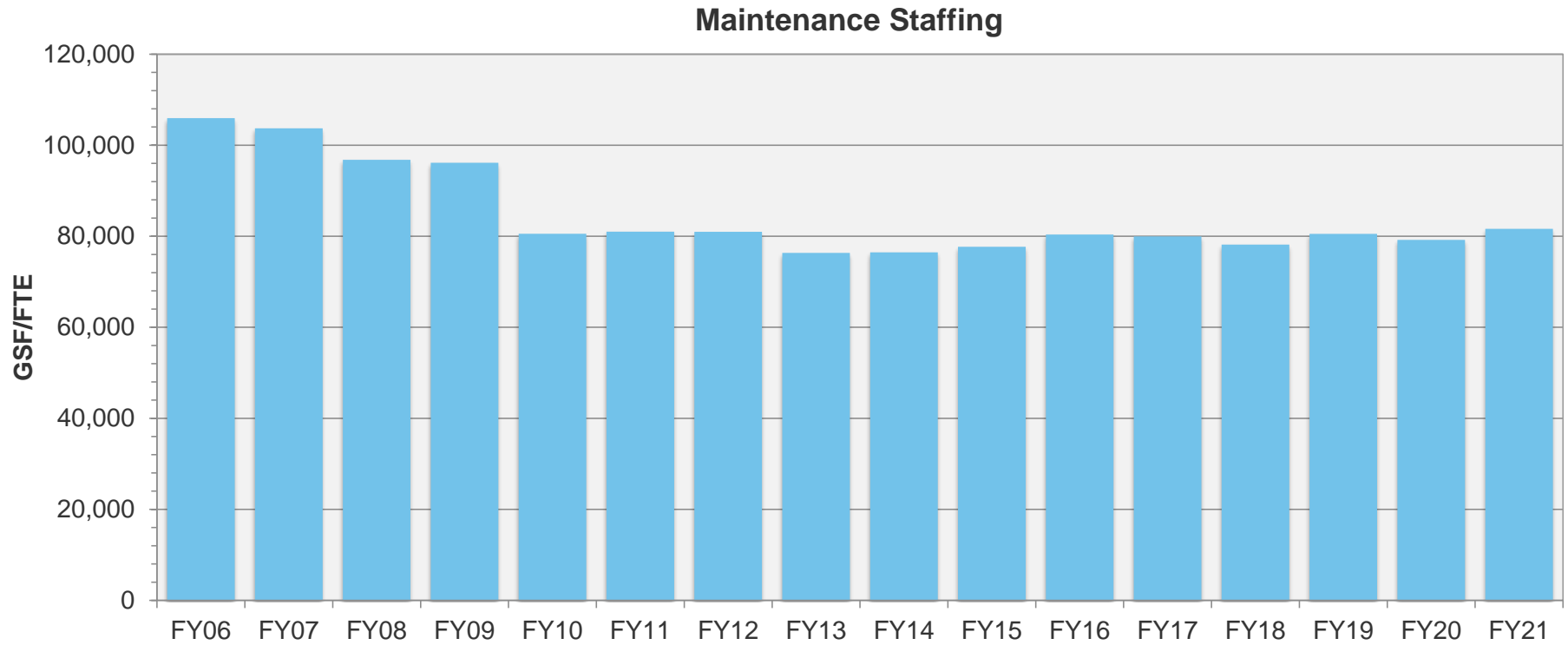
14.2

# Planned Maintenance



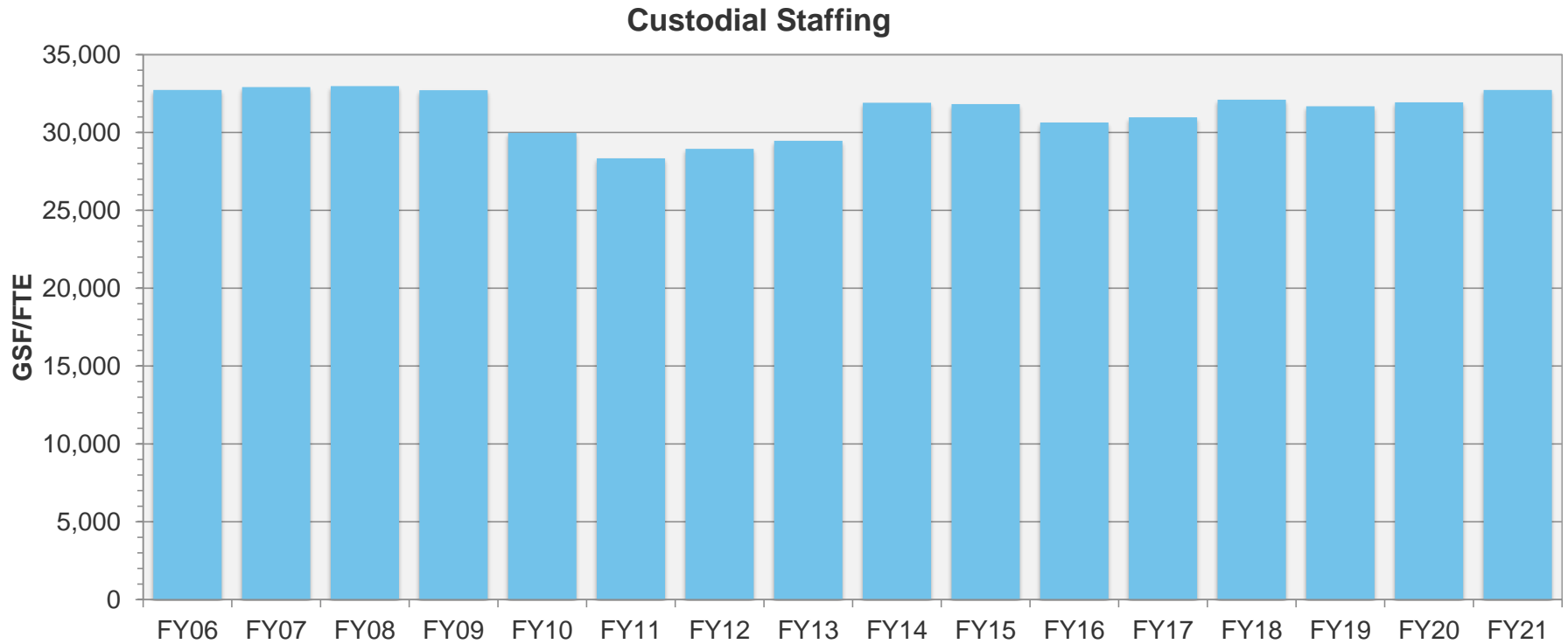
14.2

# Maintenance Staffing



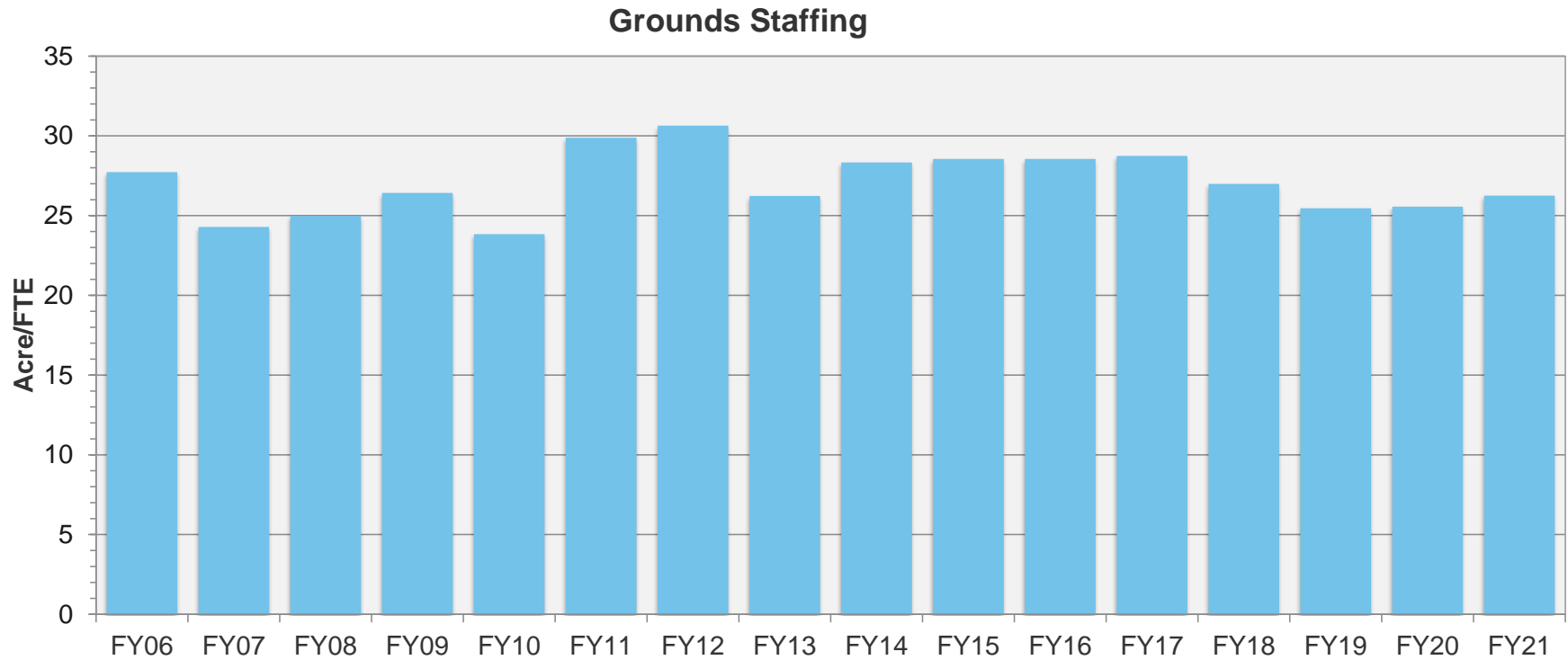
14.2

# Custodial Staffing



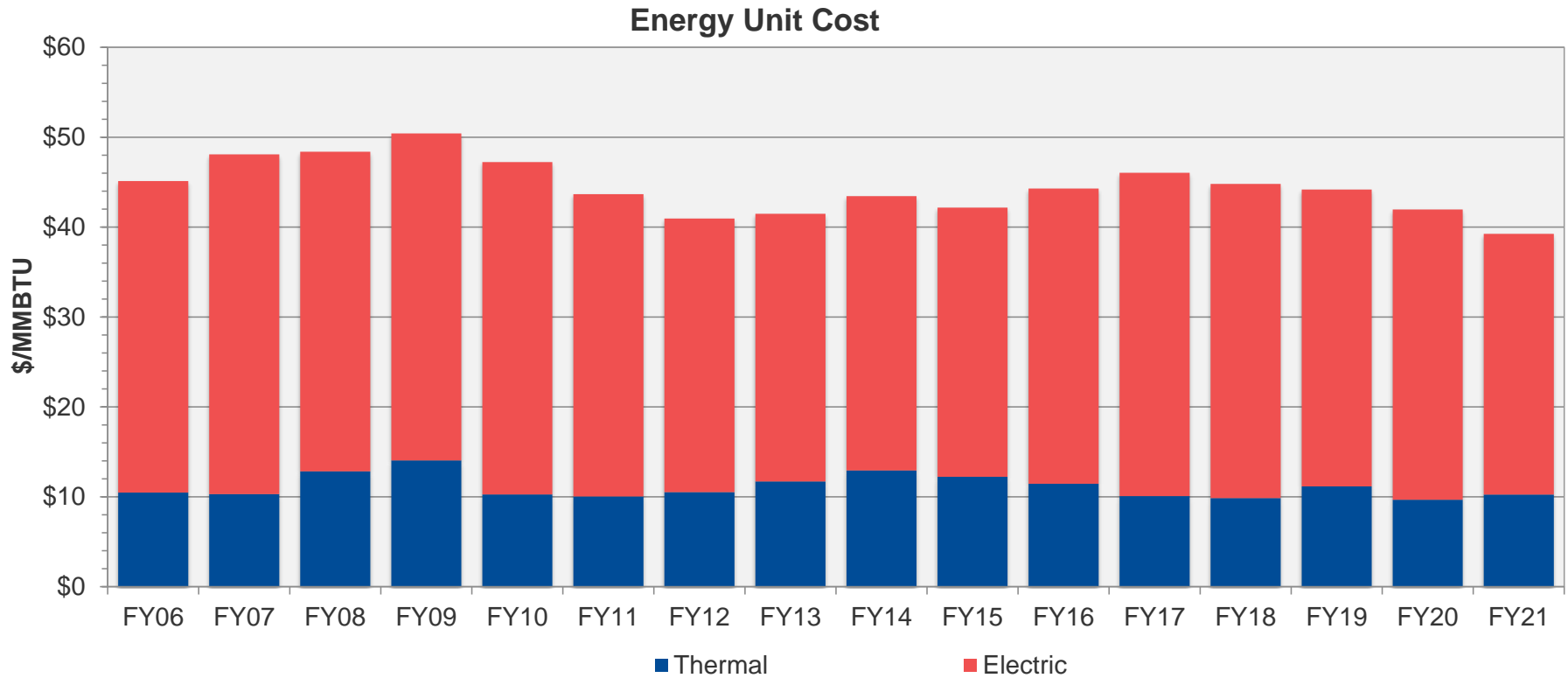
14.2

# Grounds Staffing



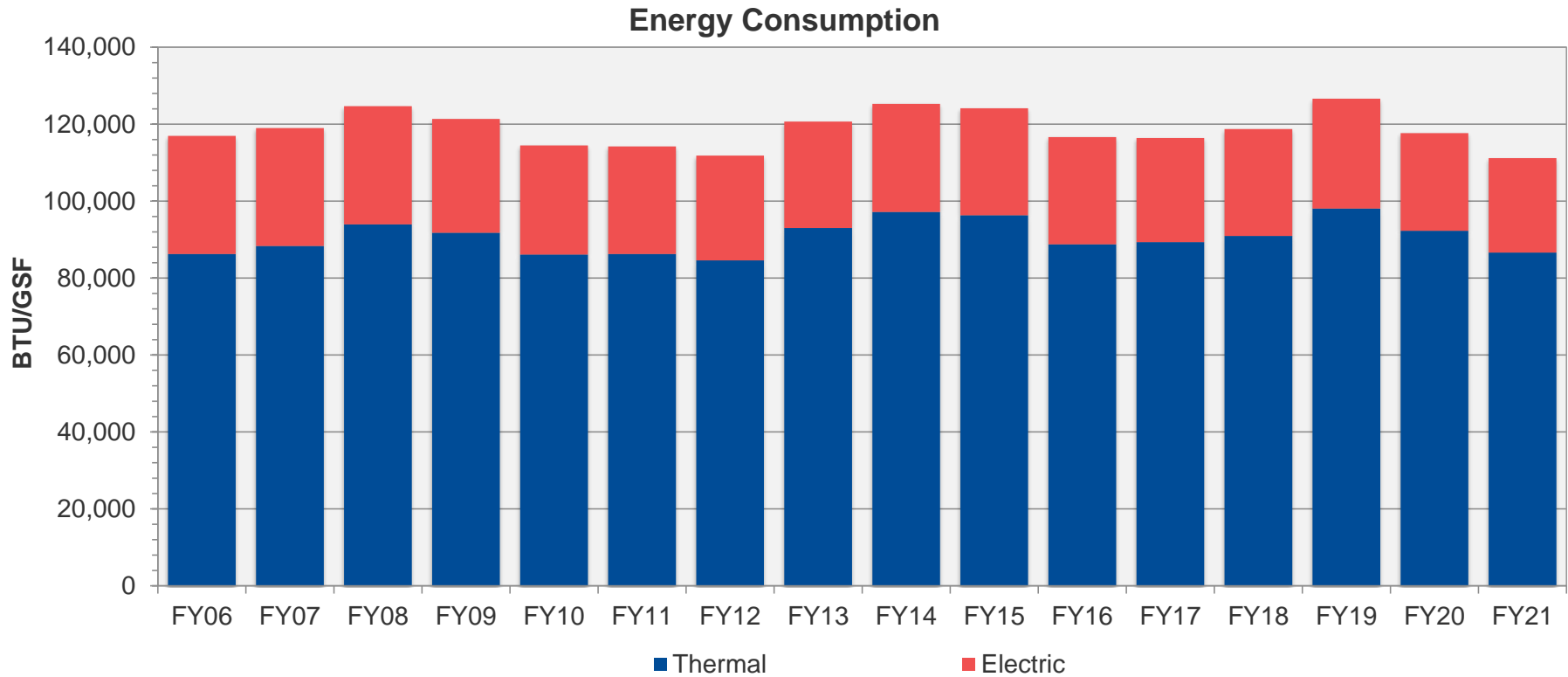
14.2

# Energy Costs



*\*\*Thermal contain all heating fuel sources, including alternative fuel sources (ie biomass, wood chips, etc.)*

# Energy Consumption

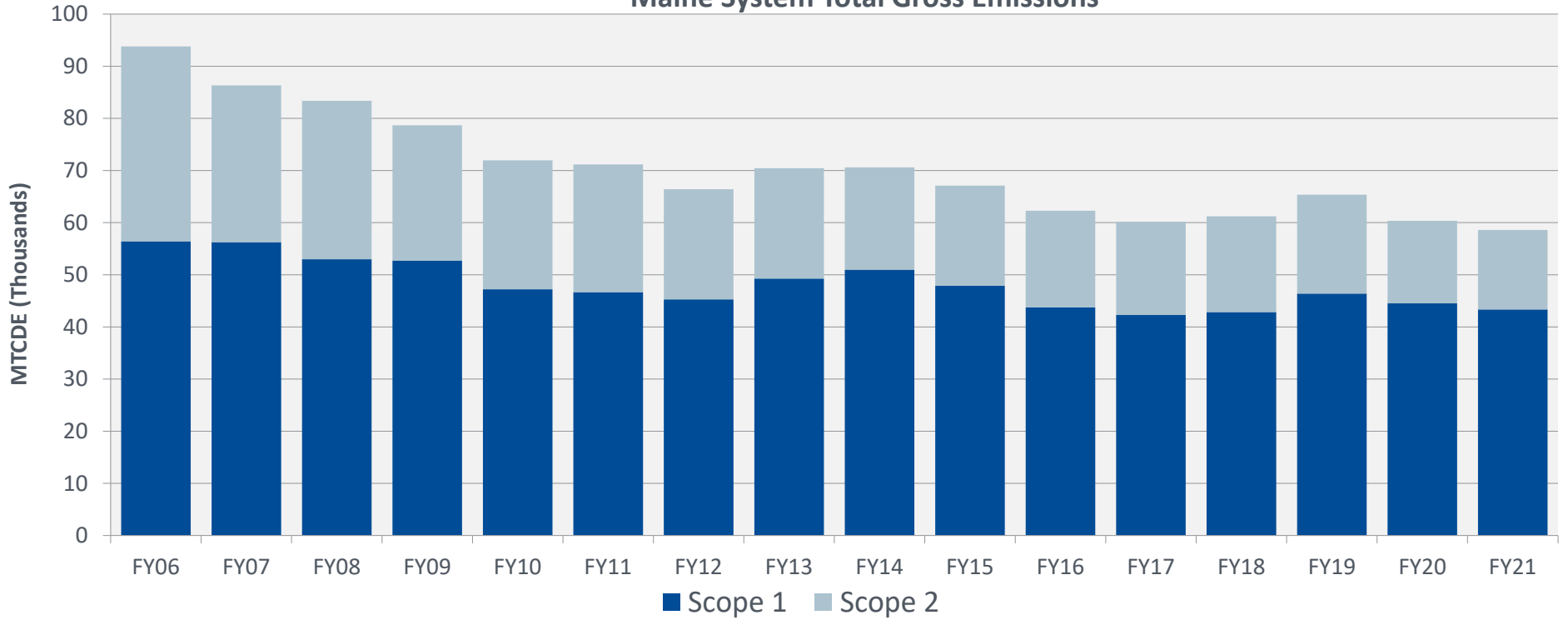


14.2

*\*\*Thermal contain all heating fuel sources, including alternative fuel sources (ie biomass, wood chips, etc.)*

# Emission Rates

Maine System Total Gross Emissions



14.2

MTCDE = Metric Tons of Carbon Dioxide Equivalent



# Strategies to Reduce % of Space Over 45

Renovations and Removal of Buildings from the Inventory

14.2

# Over 45 Template Distributed to Every Institution

Sample taken from UMS

Institution Name	Building Name	Campus	GSF	NAV	Replacement Value	Program Use
University of Maine at Augusta	Acadia Hall	Bangor	3,000	32%	\$ 766,779	Storage/Support
University of Maine at Fort Kent	Acadia House	Fort Kent	4,848	9%	\$ 949,872	Residence House
University of Maine at Augusta	Alumni Center-Augusta-East Wing	Augusta	5,600	80%	\$ 539,497	Administrative
The University of Maine	ALUMNI HALL	E&G	32,367	13%	\$ 10,008,686	Administrative
University of Maine at Farmington	Alumni Theater	Farmington	13,166	12%	\$ 3,621,975	Academic
University of Southern Maine	Anderson Hall	Gorham	29,291	30%	\$ 8,430,644	Student Life
The University of Maine	ANDROSCOGGIN HALL	AUX	59,373	52%	\$ 19,483,675	Residence Hall
The University of Maine	AQUACULTURE RESEARCH CTR	E&G	13,440	55%	\$ 3,223,008	Research
The University of Maine	AROOSTOOK HALL	AUX	49,699	43%	\$ 16,309,082	Residence Hall
The University of Maine	AUBERT HALL	E&G	100,562	41%	\$ 40,615,556	Science Building
University of Southern Maine	Bailey Hall	Gorham	143,645	38%	\$ 51,144,921	Acad/Admin
The University of Maine	BALENTINE HALL	AUX	34,568	35%	\$ 11,343,736	Residence Hall
University of Maine at Augusta	Bangor Hall	Bangor	10,984	67%	\$ 1,346,134	Acad/Admin
The University of Maine	BARN-CALF	E&G	720	57%	\$ 109,049	Support
The University of Maine	BARN-HORSE, WF	E&G	14,428	53%	\$ 2,185,224	

Assessment of Space for all buildings over 45 years old in Renovation Age

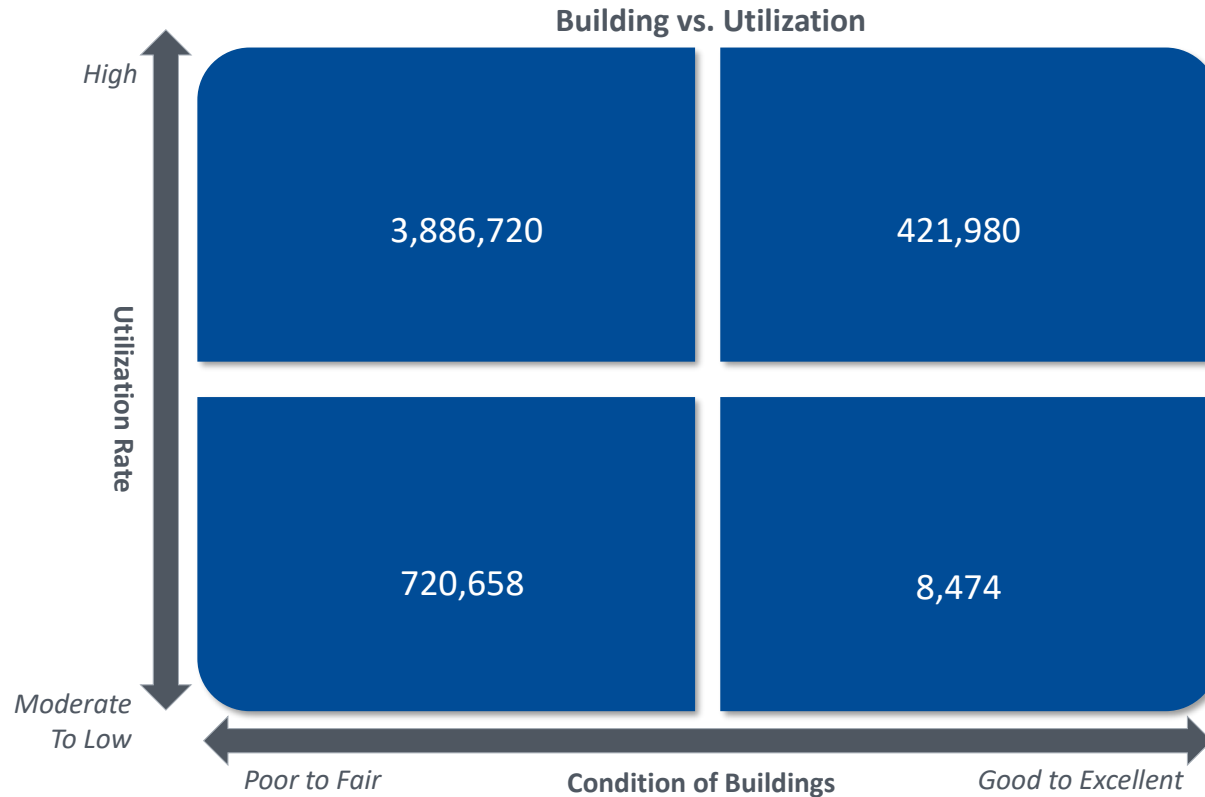
- What is the utilization of the space?
- What is the condition?

Determine if the building is a candidate for major renovation or removal from inventory.

14.2

# Total Maine System Findings

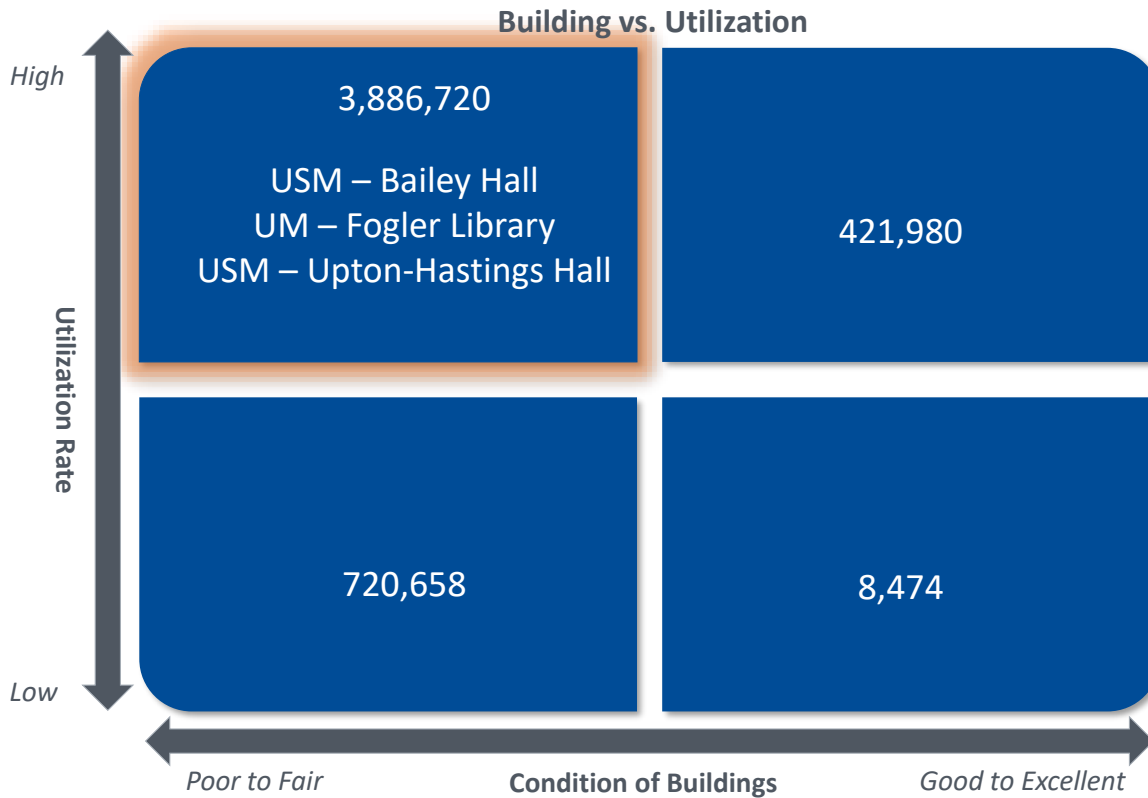
Comparing condition with utilization across the system



14.2

# Candidates for Potential Renovation

Comparing condition with utilization across the system



The University of Maine	2,075,079
University of Maine at Augusta	93,468
University of Maine at Farmington	454,546
University of Maine at Fort Kent	103,492
University of Maine at Machias	170,445
University of Maine at Presque Isle	147,465
University of Southern Maine	842,225
<b>Grand Total</b>	<b>3,886,720</b>

14.2

# Candidates for Potential Renovation

All buildings broken out by campus (High Utilization, Poor & Fair Condition)

## UM (2,075,079 GSF)

ALUMNI HALL	32,367
ANDROSCOGGIN HALL	59,373
AROOSTOOK HALL	49,699
BALENTINE HALL	34,568
BARROWS HALL-ORIG	52,979
BENNETT HALL	52,979
BOARDMAN HALL-ORIG	48,906
CHADBOURNE HALL	41,926
CHILD STUDY CENTER-ORIG	3,931
CHILDRENS CENTER, COLLEGE AVE-113	4,527
CORBETT HALL	49,433
CROSBY LAB	19,673
CUMBERLAND HALL	59,373
DAYCARE FACILITY	2,198
DEERING HALL	50,001
DUNN HALL	49,447
EAST ANNEX	20,780
FOGLER LIBRARY-AD1	57,531
FOGLER LIBRARY-ORIG	116,896
GANNETT HALL	59,373
HANCOCK HALL	68,610
HART HALL	60,410
HAUCK AUDITORIUM	46,735
HITCHNER HALL, ANIMAL SCIENCE WING-AD1	25,844
HITCHNER HALL-ORIG	9,366
KENNEBEC HALL	49,009
KNOX HALL	76,468
LENGYEL HALL	37,079
LIBBY HALL	24,208
LITTLE HALL	50,808

MACHINE TOOL LAB	12,816
MAINE BOUND ADVENTURE CTR	6,840
MAPLES, THE	8,313
MERRILL HALL-ORONO	26,729
MURRAY HALL	47,953
NEVILLE HALL-GSF CORRECTION	24,085
NEVILLE HALL-ORIG	48,660
OFFICES/LABS	7,316
OXFORD HALL	76,468
PENOBSCOT HALL	49,481
PICS BLDG-KEYO	24,300
SERVICE BLDG B	25,770
SHIBLES HALL	41,296
SOMERSET HALL	76,468
STEVENS HALL CENTER	32,596
STEVENS HALL NORTH	23,670
STEVENS HALL SOUTH	24,598
UNIV PK BLDG 12	2,198
UNIV PK BLDG 13	2,198
UNIV PK BLDG 14	5,062
UNIV PK BLDG 15	2,198
UNIV PK BLDG 16	5,062
UNIV PK BLDG 17	2,198
UNIV PK BLDG 18	5,062
UNIV PK BLDG 20	2,198
UNIV PK BLDG 23	5,062
UNIV PK BLDG 24	5,062
UNIV PK BLDG 25	5,062
UNIV PK BLDG 26	5,062
UNIV PK BLDG 27	5,062
UNIV PK BLDG 28	5,062

## UM Cont.

UNIV PK BLDG 32	2,198
UNIV PK BLDG 33	5,062
UNIV PK BLDG 34	2,198
UNIV PK BLDG 35	5,062
UNIV PK BLDG 36	2,198
UNIV PK BLDG 37	5,062
UNIV PK BLDG 38	2,198
WINGATE HALL	14,580
WINSLOW HALL	25,292
YORK HALL	82,825

## UMA (93,468 GSF)

Acadia Hall	3,232
BD KATZ LIBRARY	21,632
Eastport Hall	20,090
Farmhouse-Uma - North Wing	2,561
Farmhouse-Uma - West Wing	3,897
Fine Arts Bldg	7,657
Jewett Hall	32,925
Maintenance Garage, Ucb	1,474

# Candidates for Potential Renovation

All buildings broken out by campus (High Utilization, Poor & Fair Condition)

## USM (842,225 GSF)

ANDERSON HALL	29,291
BAILEY HALL- Sci -Orig	31,896
BAILEY HALL-Connector	70,195
BAILEY HALL-Library	41,554
BROOKS STUDENT CTR	45,645
CORTHELL HALL-North Wing	28,782
CORTHELL HALL-South Wing	19,188
COSTELLO SPORTS COMPLEX, HILL GYM	43,478
LAW BLDG-Orig	85,475
LUTHER BONNEY HALL	77,040
PAYSON SMITH HALL	52,517
ROBIE-ANDREWS HALL	44,110
ROBIE-ANDREWS HALL-Andrews Wing	34,012
ROBIE-ANDREWS HALL-Entrance	1,391
RUSSELL HALL	29,480
SCIENCE BLDG-A WING, Tower/Planetarium	47,345
SCIENCE BLDG-B Wing- Research	37,602
UPTON-HASTINGS HALL-Hastings Wing	48,760
UPTON-HASTINGS HALL-Upton wing-orig	53,896
WOODWARD HALL	20,568

## UMFK (103,492 GSF)

Blake Library	10,388.00
Crocker Hall	17,965.00
Cyr Hall	19,533.00
Fox Auditorium	20,937.00
Nowland Hall	8,680.00
Old Model School	7,986.00
Old Powell Hall	12,298.00
Physical Plant	2,545.00
St. David House	3,160.00

## UMM (170,445 GSF)

Dorward Hall-North Wing-B	22,129.00
Dorward Hall-West Wing-A	21,139.00
Powers Hall	33,525.00
Reynolds Health Center-Gym	33,741.00
SCIENCE BLDG-MACHIAS	24,183.00
Sennett Hall- South Wing C	12,612.00
Sennett Hall-Center Wing-B	10,558.00
Sennett Hall-North Wing-A	12,558.00

## UMPI (147,465 GSF)

EMERSON HALL	43,440.00
KELLEY COMMONS	18,683.00
MERRIMAN HALL	19,532.00
PARK HALL	26,148.00
VEHICLE STORAGE BUILDING	1,854.00
Wieden Hall Total GSF	37,808.00

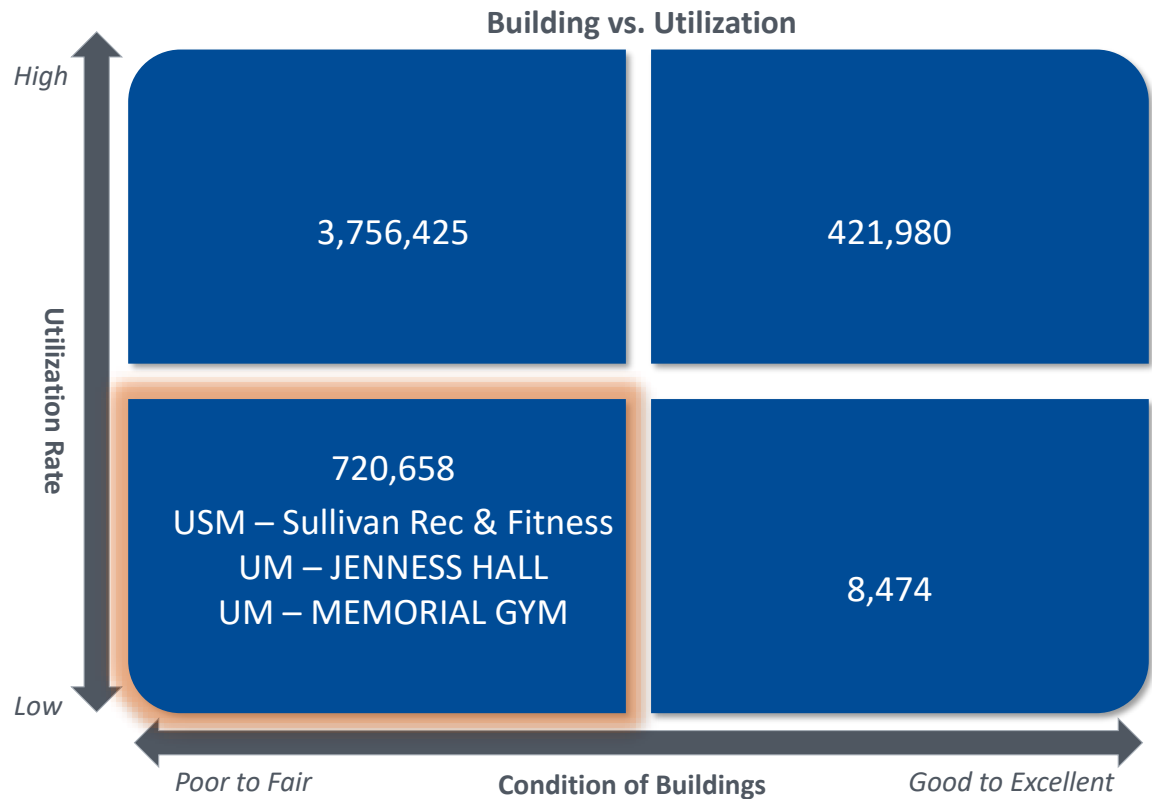
## UMF (324,251 GSF)

Dakin Hall	39,320.00
Dearborn Gym	29,890.00
Facilities Mgmt Bldg	12,425.00
Franklin Hall, Main St-252	14,815.00
Lockwood Hall	29,645.00
Mallett Hall	35,584.00
Merrill Hall	16,144.00
Olsen Student Center	39,004.00
Olsen Student Center Complex -	15,378.00
Preble-Thomas Hall	22,582.00
Purinton Hall	36,344.00
Ricker Hall	19,932.00
Roberts Learning Ctr	42,507.00
Scott Hall-North	33,820.00
Scott Hall-South	38,779.00
Stone Hall	29,113.00

14.2

# Potential Candidates for Removal

Comparing condition with utilization across the system: (Low/Moderate Utilization & Poor/ Fair Condition)



The University of Maine	480,439
University of Maine at Augusta	30,264
University of Maine at Farmington	46,565
University of Maine at Fort Kent	17,171
University of Maine at Machias	5,000
University of Maine at Presque Isle	409
University of Southern Maine	140,810
<b>Grand Total</b>	<b>720,658</b>

14.2

## Low Utilization and Poor Condition Space

Removing historical buildings and storage structures from the equation

The University of Maine	480,439
University of Maine at Augusta	30,264
University of Maine at Farmington	46,565
University of Maine at Fort Kent	17,171
University of Maine at Machias	5,000
University of Maine at Presque Isle	409
University of Southern Maine	140,810
<b>Grand Total</b>	<b>720,658</b>

Less  
Historic  
Buildings



The University of Maine	300,978
University of Maine at Augusta	30,264
University of Maine at Farmington	46,565
University of Maine at Fort Kent	17,171
University of Maine at Machias	5,000
University of Maine at Presque Isle	409
University of Southern Maine	116,355
<b>Grand Total</b>	<b>516,742</b>



## Low Utilization and Poor Condition Space

Removing historical buildings and storage structures from the equation

The University of Maine	300,978
University of Maine at Augusta	30,264
University of Maine at Farmington	46,565
University of Maine at Fort Kent	17,171
University of Maine at Machias	5,000
University of Maine at Presque Isle	409
University of Southern Maine	116,355
<b>Grand Total</b>	<b>516,742</b>

Less  
Storage



The University of Maine	282,868
University of Maine at Augusta	27,270
University of Maine at Farmington	46,065
University of Maine at Fort Kent	12,251
University of Maine at Machias	5,000
University of Maine at Presque Isle	409
University of Southern Maine	116,355
<b>Grand Total</b>	<b>490,218</b>

# Low Utilization and Poor Condition Space

Removing historical buildings and storage structures from the equation

**UM (282,868 GSF)**

AQUACULTURE RESEARCH CTR	13,440	GARAGE-TRACTOR 2	2,680
BARN-CALF	720	ISOLATION BLDG 5	1,200
BARN-HORSE, WF	14,428	JENNESS HALL-ORIG	33,368
BARN-LIVESTOCK	8,557	MACHINE SHOP	4,000
BARN-SHEEP	1,700	MEMORIAL GYM COMPLEX, WALLACE POOL-AD2	33,086
COLLEGE AVE-109, FAC MGMT GREENHOUSE	3,995	METAL UTILITY BLDG	1,920
COLLEGE AVE-154, CANADA HSE	5,000	PARK ST-204, RESIDENCE	1,320
COLLEGE AVE-378, NAVY ROTC	2,400	PERKINS HALL-AG LAB	7,781
COLLEGE AVE-495	2,300	POTATO HANDLING RESEARCH	1,600
CUTLER HEALTH CENTER, AMBULANCE BAY	588	ROGER CLAPP GREENHOUSE-GSF CORRECTION	981
CUTLER HEALTH CENTER-ORIG	29,954	SERVICE BLDG A-AD1	22,795
DAIRY FACILITY	7,240	SERVICE BLDG A-ORIG	30,627
DEPOT-FIRE STATION	6,653	SHEEP HOUSE	2,000
ENTOMOLOGY BLDG	1,539	SIGMA CHI HERITAGE HOUSE	12,370
ENTOMOLOGY GREENHOUSE	2,304	SMALL ANIMAL FACILITY	4,280
ENVIRONMENTAL SCIENCES LAB	7,175	STEAMFITTERS SHOP	2,086
FARM HOUSE	2,256	STORAGE-DEERING	68
FARM SHOP-WF	4,273	STORAGE-GAS, RF	60
FARM STORE	1,486	STORAGE-SHED	156
FORAGE RESEARCH LAB	900	STORAGE-STEWART	372
GARAGE-COLLEGE AVE-378, NROTC	783	UNIVERSITY PARK	27
GARAGE-CWRU	1,200	UTILITY BLDG-DF	1,200

14.2

# Low Utilization and Poor Condition Space

Removing historical buildings and storage structures from the equation

## UMA (27,270 GSF)

Bangor Hall	11,276
Fitness Center	11,307
Mod I	953
Mod II	953
Mod III, Maine Cite	1,035
Pottery Shop	1,746

## UMF (46,065 GSF)

Alumni Theater	13,166
Brinkman Hse, Main St-228	4,602
Lincoln St-125, Honors Center	4,034
Main St-234, Psychology	9,759
Main St-242, Ferro Alumni Hse	7,899
Quebec St-149	2,586
South St-101	4,019

## UMFK (12,251GSF)

Acadia House	4,848
Cyr House	2,514
Gagne Residence	1,597
Haenssler Honors Center	3,292

## UMM (5,000 GSF)

O'Brien House	5,000
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## UMPI (409 GSF)

KILN	409
------	-----

## USM (116,355 GSF)

BASEBALL PRESSBOX	859
BEDFORD ST-092	5,975
BEDFORD ST-094	2,859
BEDFORD ST-098	3,020
BEDFORD ST-102	3,682
BEDFORD ST-106	3,837
BEDFORD ST-126	5,371
COLLEGE AVE-019	4,109
DEERING AVE-222	2,792
DEERING AVE-228	3,842
EXETER ST-047	3,732
EXETER ST-059-061	6,610
PRINT MAKING STUDIO	1,555
SCHOOL ST-062	3,313
SULLIVAN REC & FITNESS CTR-Orig	54,452
The Farm House	10,347

14.2

University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** University of Maine Rolling Capital Master Plan Update

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:** X

**BOARD ACTION:**

**BOARD POLICY:**

701 – Budgets, Operating & Capital

**UNIFIED ACCREDITATION CONNECTION:**

Given the Unified Accreditation initiative, the Harold Alfond Foundation (HAF) grant totaling approximately \$200+ million for capital upgrades at UMaine, R1 status recently achieved, and UMaine’s aging physical plant, UMaine leadership set out to update its 10-year capital plan in the form of a Rolling Capital Master Plan. The Finance, Facilities and Technology Committee received their first look at UMaine’s Rolling Capital Master Plan in March 2021. UMaine believes that this method of capital planning will continue to provide the necessary flexibility to address broad and diverse facility needs over the next decade with an overarching strategy built around the institution’s Strategic Vision and Values.

**BACKGROUND:**

UMaine leadership will present an update of our Rolling Capital Master Plan which is intended to give the Board of Trustees a sense of our growth and facility renewal strategy for the next decade.



# Rolling Capital Master Plan

FY'22 through FY'32

Finance, Facilities and  
Technology Committee  
March 10, 2022

15.1

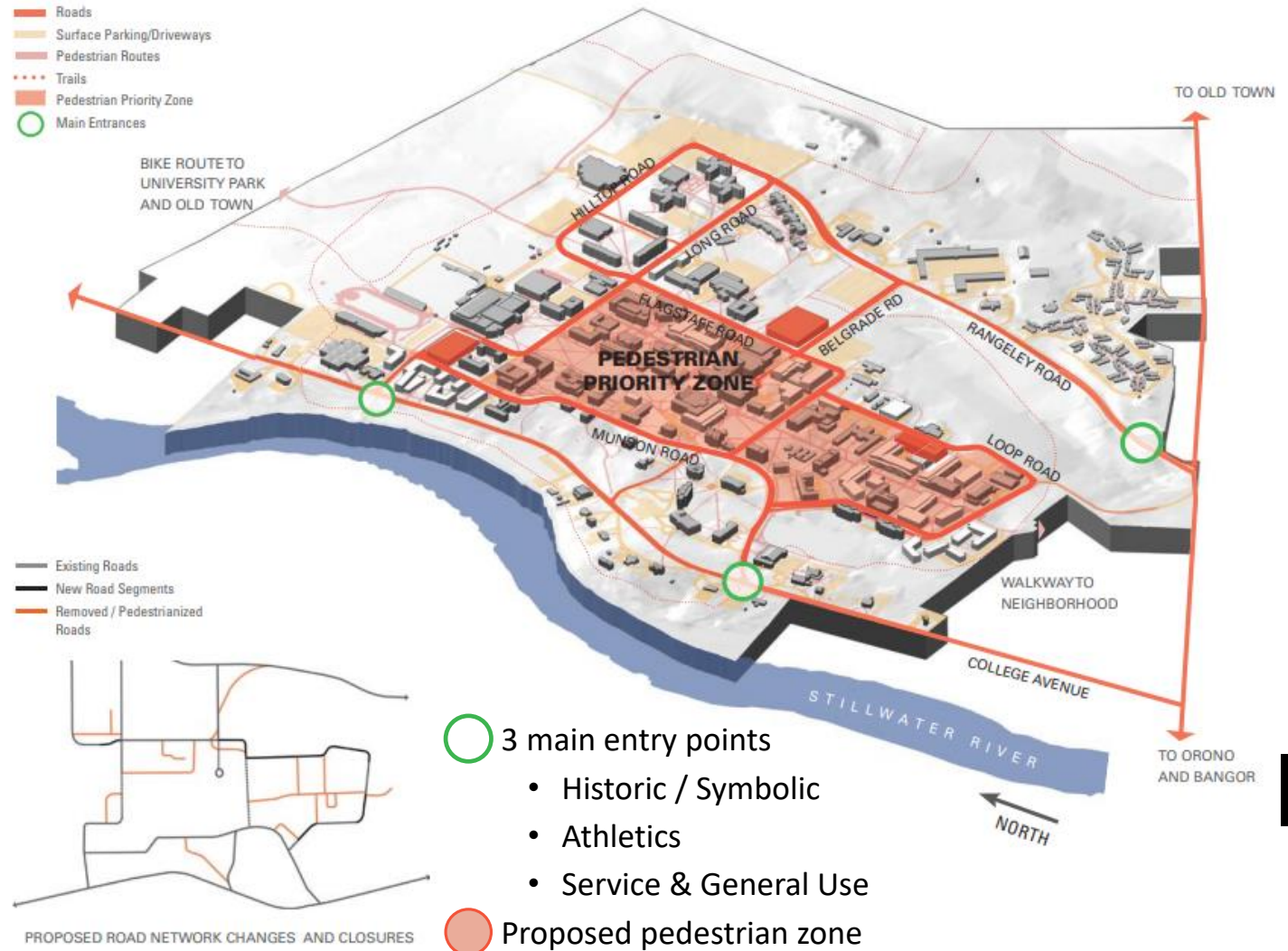


# Agenda

- Sasaki 2009 Master Plan
  - Capital planning review
- Projected growth & capital planning
- Major capital projects underway
  - UM Energy Center and enabling projects
  - Academics and research
  - Athletics
  - Residential and hospitality
  - Deferred maintenance
- Potential Capital Spending Plan

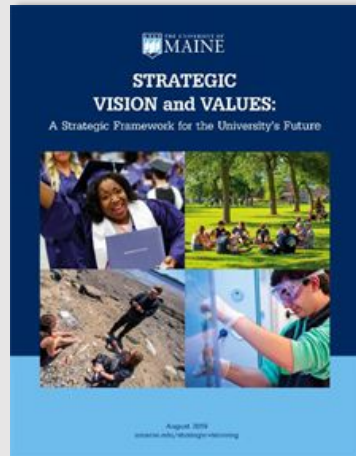


UMaine last conducted a Master Plan in 2009.





# Strategic Framework



## Strategic Vision and Values

- Fostering Learner Success
- Creating and Innovating for Maine and Beyond
- Growing and Stewarding Partnerships



## TRANSFORMS Maine's Public Universities

### Harold Alfond Foundation Grant match



\$90M/ \$20M Black Bear Athletics

\$20M/ \$25M Student Success and Retention



\$75M/ \$75M Maine College of Engineering, Computing, and Information Science (MCECIS)

\$55M/ \$50M Maine Graduate and Professional Center



15.1

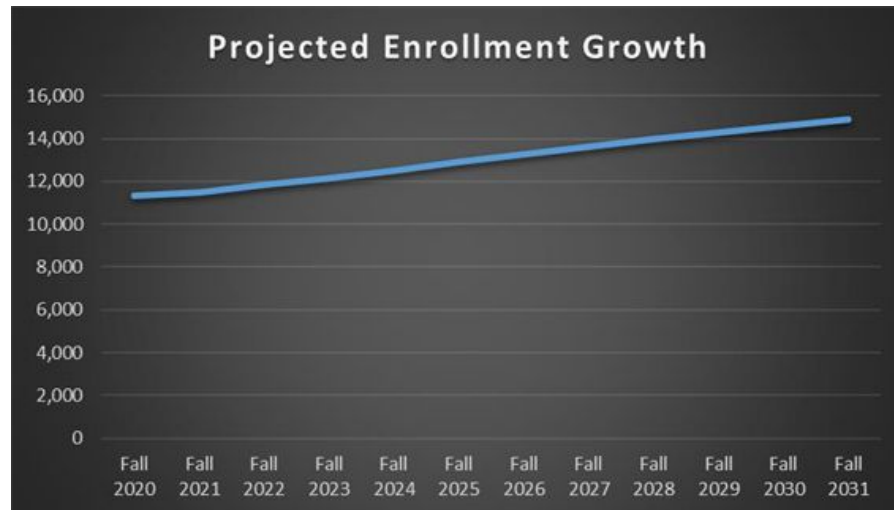




We are projecting a strategic growth context for research and enrollment with an emphasis on Diversity, Equity and Inclusion.

**UMaine facilities will need to accommodate growth and change.**

- We need newer larger, more open spaces, with more technology and tools.
- Graduate student enrollment growth can be a major driver of increased space need.
- Replacement and modernization of campus spaces important to support achievement.



- UMaine ascends to highest tier of 146 national research universities.
- Our new R1 status has long-term implications.

**15.1**



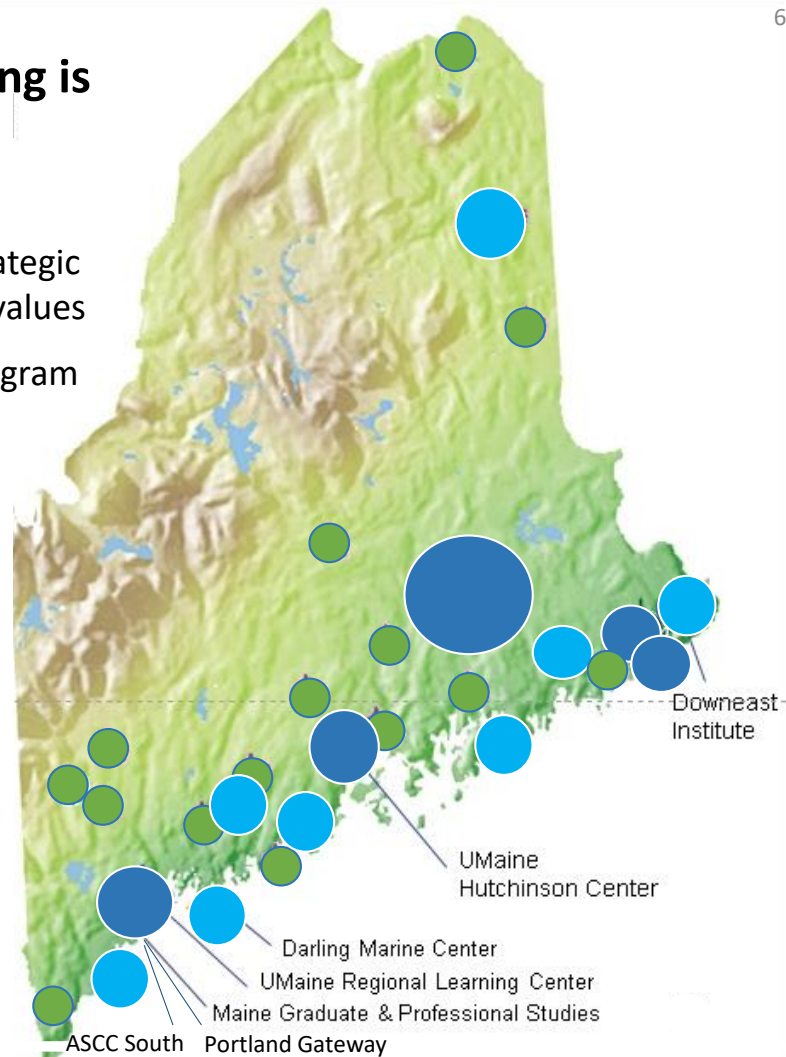
Iterative  
planning  
includes  
Rolling Capital  
Master Plan.

## Rolling capital master planning is

- Comprehensive, informed, flexible, strategic and tactical
- Operates within the UMS overall strategic framework, and UMaine vision and values
- Integrates strategies with capital program and capital spending plans
- Incorporates recent and ongoing planning
- Clearly projects realistic timelines for major capital projects
- Space committee advises cabinet

### UMaine is Statewide

- *Academic*
- *Research, Marine Research & Farms*
- *Cooperative Extension/4H*





# Major Capital Projects

## UMaine Energy Center and enabling projects

15.1



Capital master planning must consider energy and climate change challenges.

Our 4 goals remain the same (Reliable, Renewable, Economical, and Predictable)

## Next Steps: New UMaine Energy Center



Proposed project size:	20,000 sq. ft.
Proposed project cost:	\$130M
Funding sources:	State, Rev. Bonds & Fundraising
Proposed BOT approval:	design only

- University is reviewing and evaluating the viability of biomass and renewable natural gas/oil fuels for a new power plant.
- Commencing the next phase of the UMEC Project (Schematic Design), expected to last approximately 12 months
- We will also pursue demand-side energy conservation projects
- Replacement of the current childcare center is an enabling project due to location



# Major Capital Projects

Academic & Research

15.1



Next step for MCECIS includes a 3-phase master plan for UMS engineering, computing and information science

## ***In planning:*** 10-yr MCECIS Master Plan

*UMaine campus plan awarded to Perkins-Eastman July of 2021*

- Building programs and attracting student and faculty talent
- Improving facilities at UMaine
- UMaine as anchor, strong UMaine-USM collaboration, UMS-wide connections

Proposed project cost Phase 1:~\$138M

Funding sources: HAF, state bonds & fundraising

Proposed BOT approval: FY23-FY31



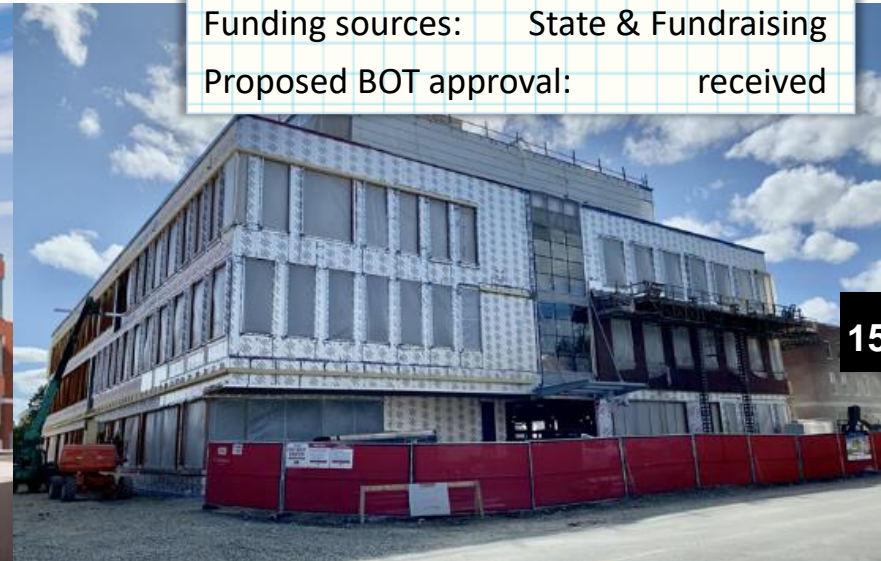


# Ferland Engineering Education & Design Center

## *In construction:* Ferland Engineering Education & Design Center

- 14 student meeting rooms, 3 collaborative classrooms & 2 seminar rooms
- Student project design suite
- Student commons with food service
- Ribbon cutting August of 2022

Project size:	105,000 sq. ft.
Project cost:	\$78M
Funding sources:	State & Fundraising
Proposed BOT approval:	received

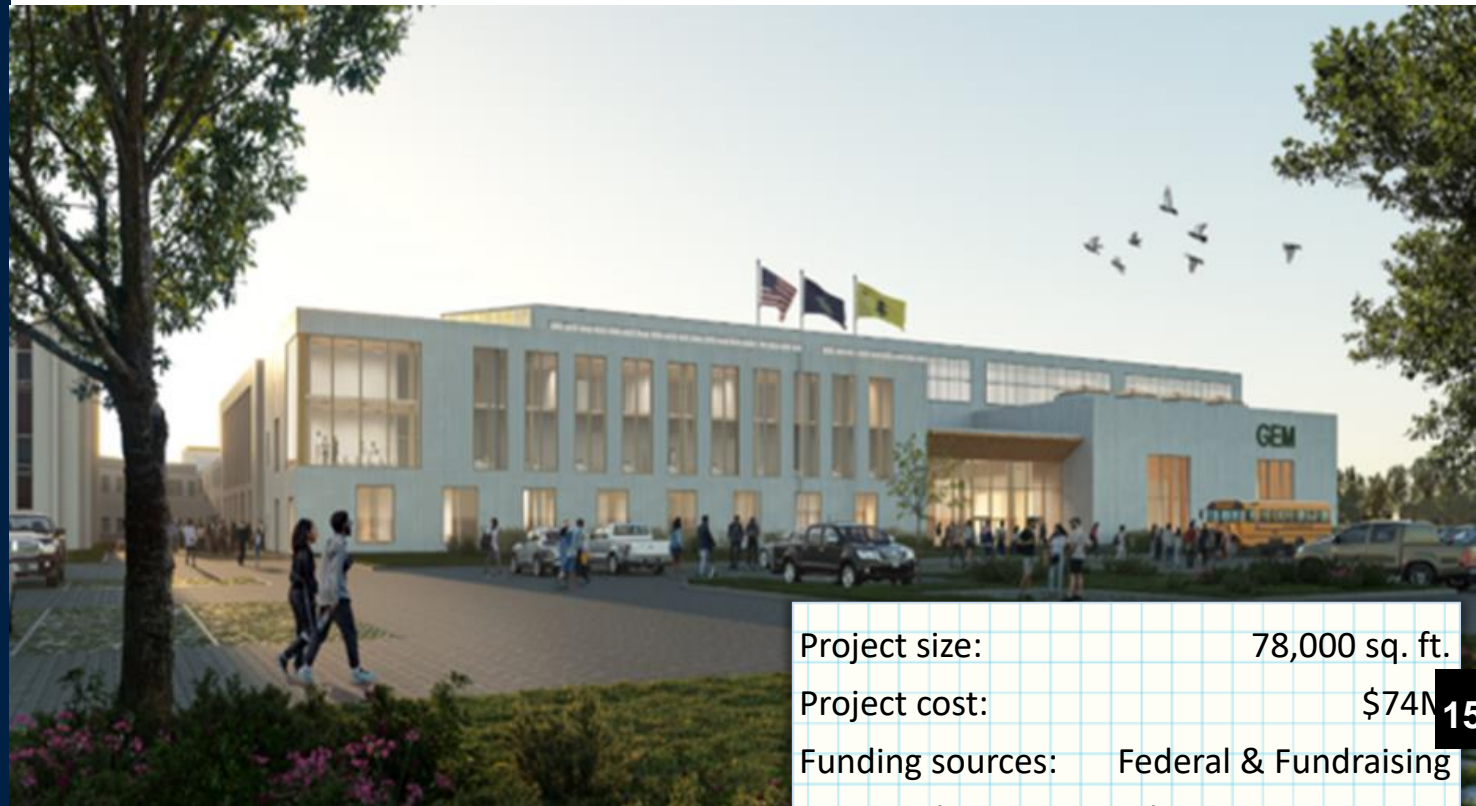


15.1



Research  
Factory of the  
Future, in  
planning  
(*Conceptual  
Drawing*)

## *In design:* Green Engineering Manufacturing



Project size:	78,000 sq. ft.
Project cost:	\$74M
Funding sources:	Federal & Fundraising
Proposed BOT approval:	FY23

15.1



## *In Planning:* Other Research Projects



**Sustainable Aquaculture Workforce and Innovation Center**

Project size: 1,500 sq. ft.  
 Project cost: \$7M  
 Funding sources:  
 MJRP, US EDA, USDA  
 Proposed BOT approval:  
 Summer 2022



**Aroostook Farm Research and Education Center**

Project size: TBD  
 Project cost: \$4M  
 Funding sources:  
 MJRP, USDA  
 Proposed BOT approval:  
 Summer 2022



**Food Innovation Cluster Food Quality Laboratory**

Project size: TBD  
 Project cost: \$5.5M  
 Funding sources:  
 MJRP, Federal and other State funds, philanthropy, revenue generation  
 Proposed BOT approval:  
 Summer 2022



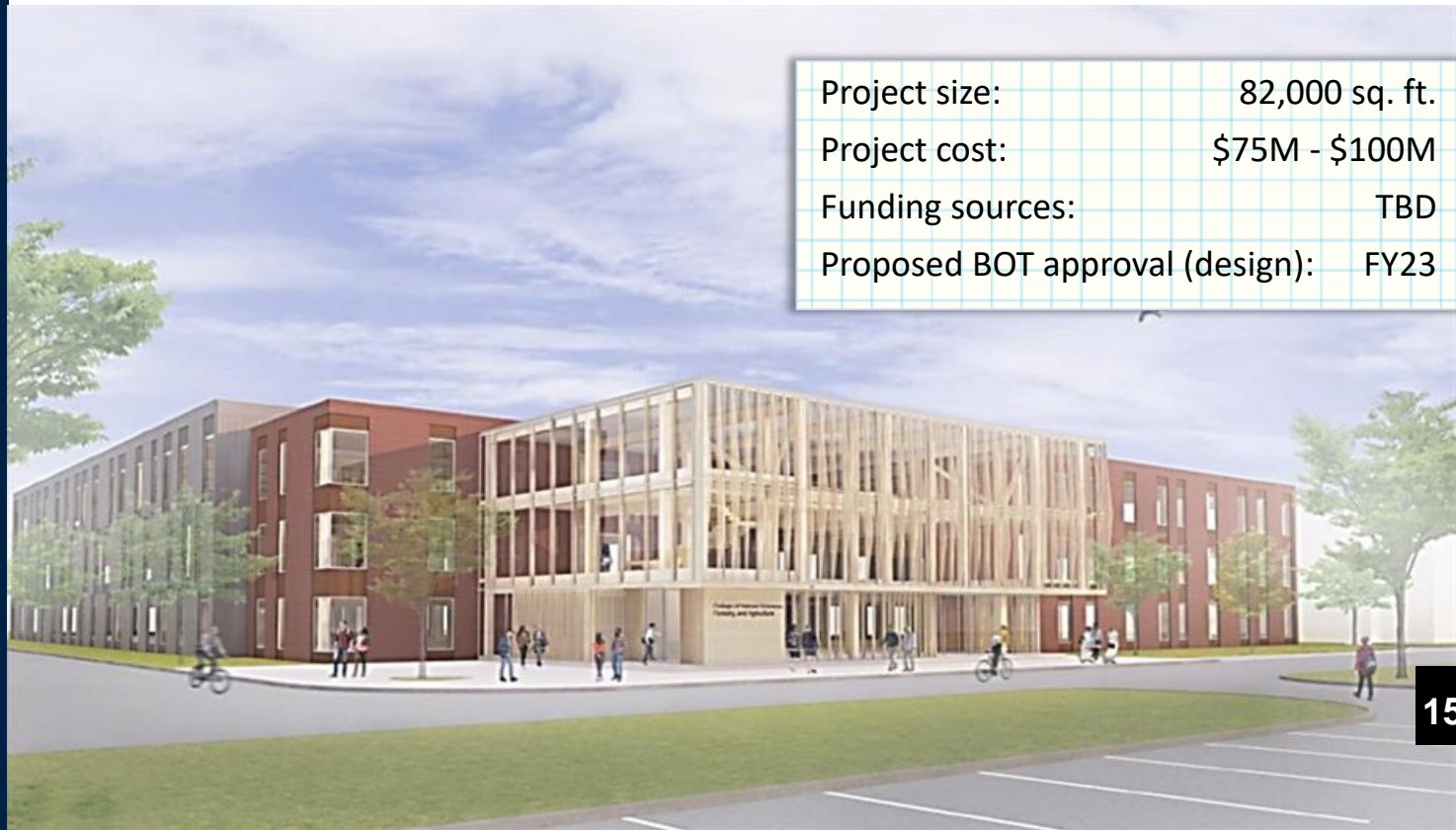
**Forest Biomaterials Innovation Center (Jeness 4.0)**

Project size: 18k-20K sq ft.  
 Project cost: \$30M  
 Funding sources:  
 EDA +, other Fed (NBRC, ORNL), Industry  
 Proposed BOT approval:  
 Summer 2022  
 (if construction grant is approved)



# One-Health and the Environment Building *(Conceptual Drawing)*

## ***In planning:*** One-Health and the Environment



15.1



# Major Capital Projects Athletics

15.1



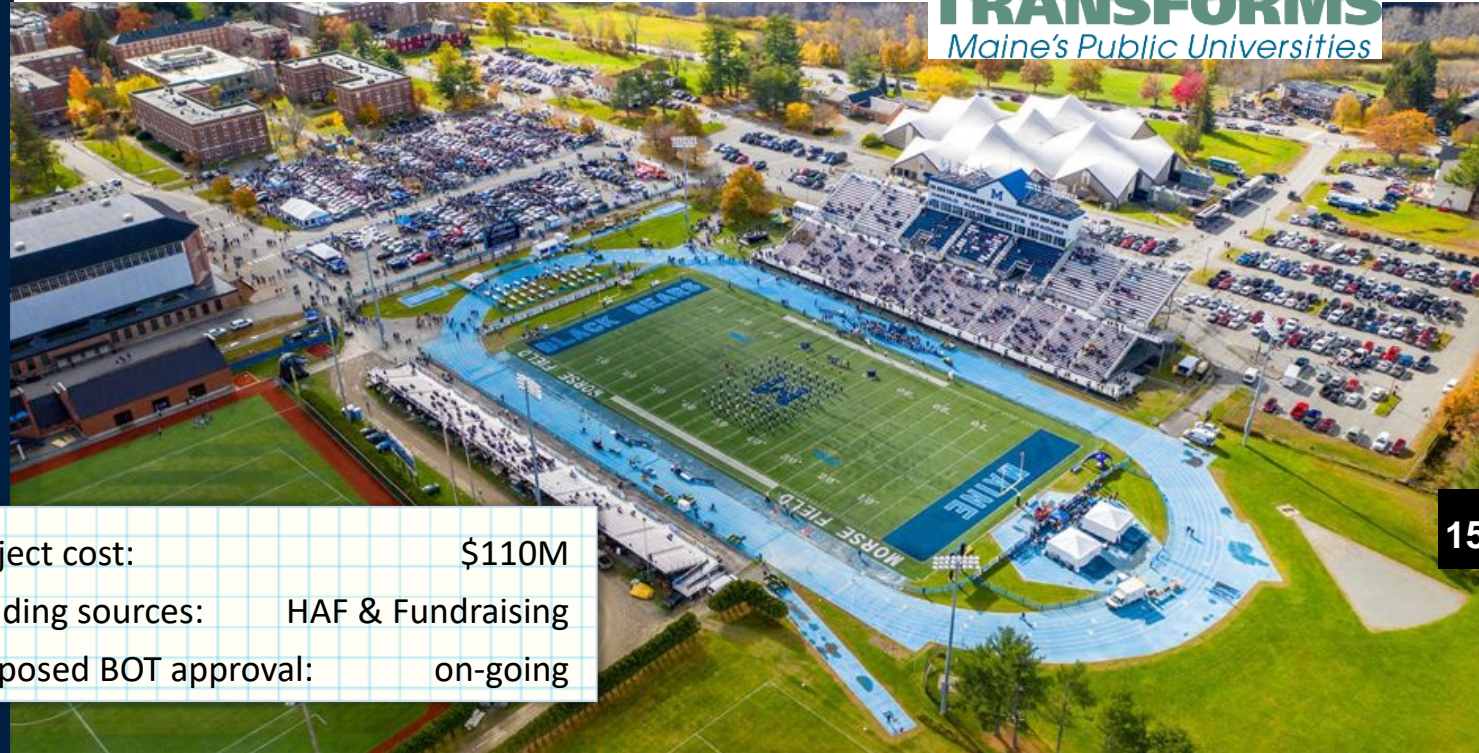
Planning and design awarded to WBRC & Crawford Architects Sept. 2021

## *In planning:* 10-year Athletics Master Plan



UNIVERSITY OF MAINE SYSTEM

**TRANSFORMS**  
Maine's Public Universities



Project cost:	\$110M
Funding sources:	HAF & Fundraising
Proposed BOT approval:	on-going

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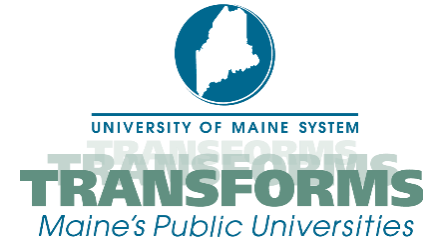


# Near term Division I Athletics Facilities Upgrades

## *In design:* New and replacement athletic fields

### Approved Projects for Construction

- New Soccer Field
- Renovation of Field Hockey Field
- Renovation of Softball Field
- Infrastructure upgrades
- Football turf replaced



Project cost:	\$14M
Funding sources:	HAF & Fundraising
Proposed BOT approval:	received



# Major Capital Projects

## Residential and Hospitality

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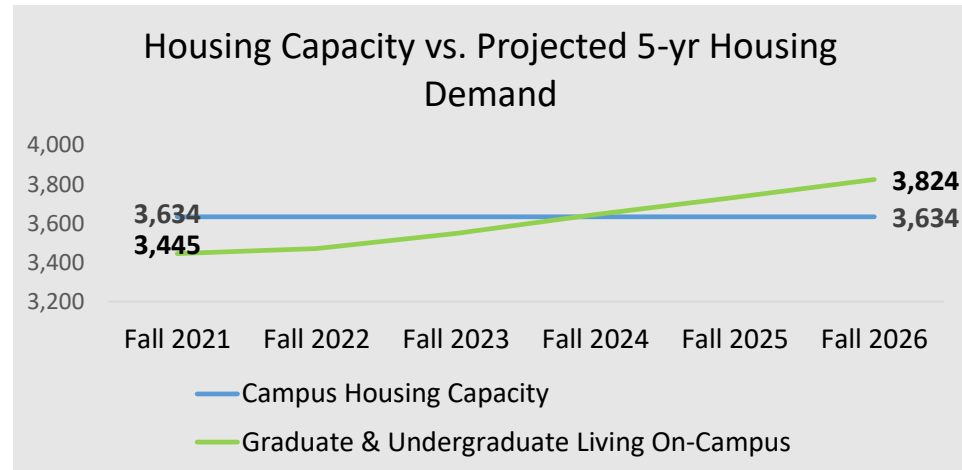


In 2014, Sasaki completed a master plan in response to a growth plan of 15,000 students.

## *In planning:* Residence Hall Renewal & Expansion

2014 Sasaki report identified projected need of 1,500 additional beds and renovation/renewal of current housing:

- 19 Resident Halls
- Average age: 63 years old
- Current Capacity: 3,634 beds
- Fall FY22 Use: 97%
- 94% of freshmen students live on-campus
- FY23/FY24 needs exceed current capacity
- Replacement cost: \$714M



15.1



UMaine  
Boutique Hotel  
projected to  
open summer  
2023

## *In negotiations:* Boutique Hotel P3

Reuse former Colburn and Holmes hall to provide an option for campus visitors to stay on campus



Proposed project cost:	\$22M
Funding sources:	PPP
Proposed BOT approval:	received

15.1





# UMaine & UMM Stewardship and Deferred Maintenance

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Addressing \$750M in deferred maintenance is a key component to our rolling master plan.

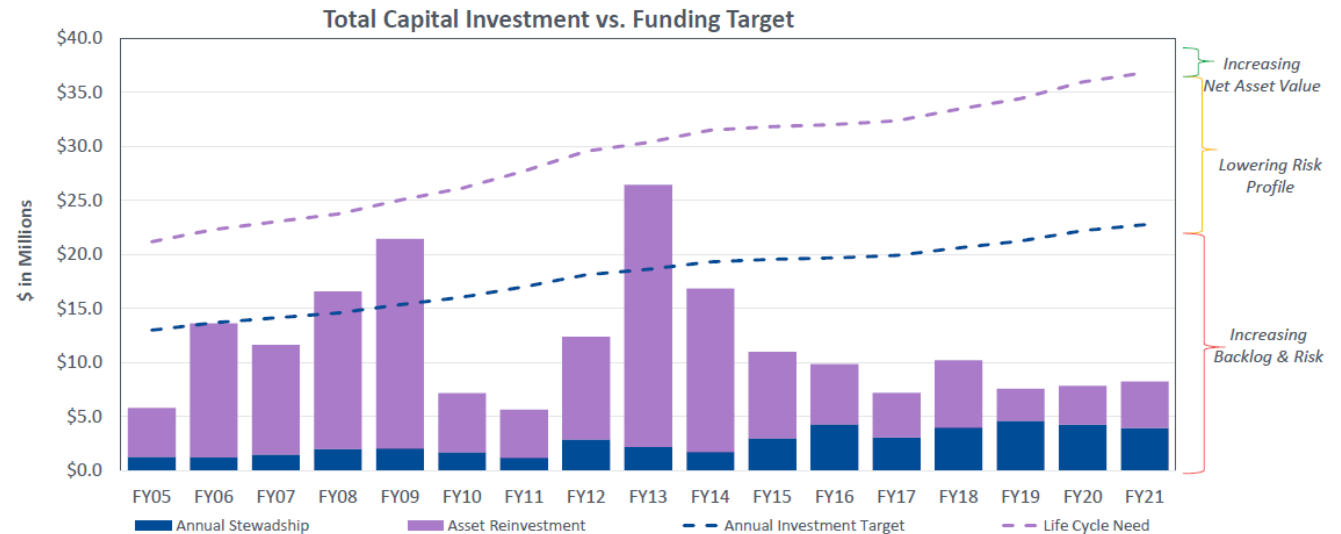
**Annual Call & Funded Depreciation** – Annually / On-going with funding of \$100M over next 10 years

**Building Removals** - Annually / On-going with funding of \$10M over the next 10 years

**Boudreau Hall & Other Naming Opportunities** - \$10M over the next 10 years



UM combined investment below Sightlines' Annual Investment Target over the 7 years totals \$84M



### Space Committee

- Balance total amount of space
- Replace aging facilities
- Allow for contemporary, competitive facilities

### Stewardship of UMaine's capital assets

- Preventive and deferred maintenance
- Management and coordination of ongoing "churn"

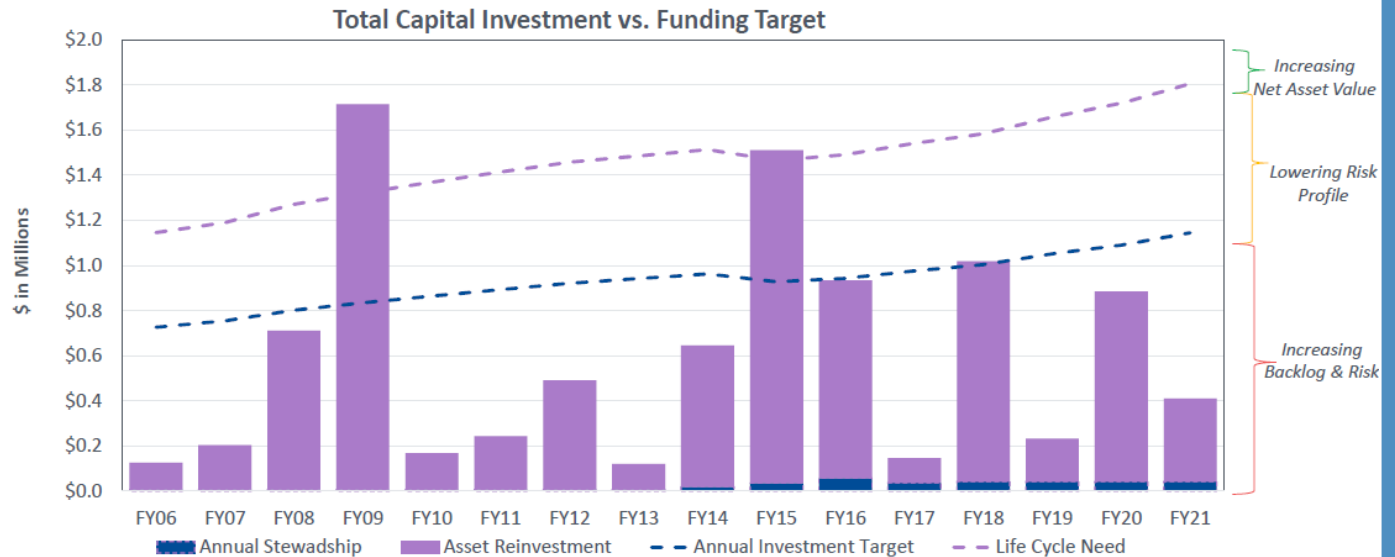


Addressing \$1.15M in deferred maintenance is a key component to our rolling master plan.

**Annual Call & Deferred Maintenance –**  
Annually / On-going with funding of \$11.5M over next 10 years



Falling short of target increases the Backlog and Risk on campus



**Space Committee**

- Balance total amount of space
- Replace aging facilities
- Allow for contemporary, competitive facilities

**Stewardship of UMaine’s capital assets**

- Preventive and deferred maintenance
- Management and coordination of ongoing “churn”



## **Total:** Proposed Facility Capital Spending, 2022-2031

*As of 2.23.22*

We have a 10-year proposed spending plan in the rough order magnitude of \$1 billion.

	\$millions		System Funding	State Funding	Federal Support	Revenue Bonds	Alfond Grants	Fundraising	P3	Operating Funds/ reserves	Totals
	low	high									
ACADEMIC & RESEARCH	\$232.5	\$262.5		\$24	\$154.5	\$50		\$30		\$4	<b>\$262.5</b>
MCECIS MASTER PLAN & FERLAND	\$198	\$216		\$47		\$40	\$50	\$77		\$2	<b>\$216</b>
RESIDENTIAL & HOSPITALITY	\$218	\$257				\$100		\$10	\$97	\$50	<b>\$257</b>
ATHLETICS MASTER PLAN	\$110	\$110					\$90	\$20			<b>\$110</b>
UMEC & ENABLING PROJECTS	\$98	\$130		\$30		\$90		\$10			<b>\$130</b>
UM STEWARDSHIP & DEFERRED MAINTENANCE	\$100	\$120	\$10	\$25		\$25		\$10		\$50	<b>\$120</b>
UMM STEWARDSHIP & DEFERRED MAINTENANCE	\$10	\$11.5		\$3		\$3				\$5.5	<b>\$11.5</b>
	<b>\$966.5</b>	<b>\$1,107</b>	<b>\$10</b>	<b>\$129</b>	<b>\$154.5</b>	<b>\$308</b>	<b>\$140</b>	<b>\$157</b>	<b>\$97</b>	<b>\$111.5</b>	<b>\$1,107</b>

**15.1**



**Thank you!**

15.1

University of Maine System  
Board of Trustees

**AGENDA ITEM SUMMARY**

**NAME OF ITEM:** Adaptive reuse of Coburn and Holmes Hall – Public-Private Partnership Authorization Increase, UM

**INITIATED BY:** Patricia A. Riley, Chair

**BOARD INFORMATION:**

**BOARD ACTION:** X

**BOARD POLICY:**

701 – Budgets, Operating & Capital

**UNIFIED ACCREDITATION CONNECTION:**

N/A

**BACKGROUND:**

**a. Summary of the request**

The University of Maine System, acting through the University of Maine, requests to increase the authorization for the Adaptive reuse of Coburn and Holmes Hall– Public-Private Partnership Authorization by \$1,000,000 for a total expenditure of up to \$3,000,000. This request for additional funding is due to increased costs associated with the building, utilities upgrades, and parking lot construction. These increases are attributed to inflation, labor and material shortages and cost escalation in the construction market.

This request is pursuant to Board Policy 701, which requires projects with a total cost of more than \$500,000 and any increases to those projects, be considered by the Board of Trustees or its Finance, Facilities & Technology (FFT) Committee. The request is that the FFT Committee forward the authorization to the Consent Agenda at the March 27-28, 2022, Board meeting.

**b. Overall requested budget and funding source:**

The current request is for authorization for an additional \$1,000,000 to come from UMaine’s annual capital budget. In November 2021 the Board of Trustees authorized the expenditure of up to \$2,000,000 for the adaptive reuse of Coburn and Holmes Halls with funding to come from auxiliaries’ reserves. The University and the developer of this public private partnership are seeking New Markets Tax Credits, developer concessions, and potential fundraising opportunities which will be used to reduce the overall \$3,000,000 potential investment in this project.

**c. More detailed explanation of rationale for project and metrics for success of the project:**

No changes from prior Board authorizations.

**d. Explanation of the scope and substance of the project as needed to supplement (a) and (c) above:**

No changes from prior Board authorizations.

3/4/2022

- e. **Changes, if any, in net square footage or ongoing operating costs resulting from the project:**  
No changes from prior Board authorizations
- f. **Budget for the project and further elaboration on funding source and selection as needed to supplement (b):**  
Funding for the development project will be provided by Radnor Property Group through various sources including but not limited to private equity, debt as well as federal and state historic tax credits.
- g. **Alternatives that were considered to meet the need being addressed by this project:**  
No changes from prior Board authorizations
- h. **Timeline for start, occupancy, and completion:**  
UMaine and Radnor expects to close on this agreement on April 15<sup>th</sup>. Construction will begin in May of 2022 with completion in summer of 2023.
- i. **Timeline for any further consideration or action anticipated to be needed by the Board or its committees regarding this Project if full authority is not being requested from the outset.**  
At this time, no additional consideration is anticipated to be needed.
- j. **Additional information that may be useful for consideration of the item.**  
Addressed in prior Board meetings.

**TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities, and Technology Committee, approves the following resolution to be forwarded to the Consent Agenda for Board of Trustee approval at the March 27-28, 2022, Board Meeting:

That the Board of Trustees accepts the recommendation of the Finance Facilities and Technology Committee and authorizes the University of Maine System, acting through the University of Maine to expend an additional \$1,000,000 for a total of \$3,000,000 to pursue a public private partnership through a 99-year ground lease and Definitive Agreement with Radnor Property Group, LLC for the building redevelopment of Coburn Hall and Holmes Hall, and an addition to Holmes Hall. The additional funds will come from annual campus capital budget expenditures.

3/4/2022