

## Minnesota State University, Mankato - Armstrong Hall Replacement

**AT A GLANCE****2020 Request Amount:** \$6,691**Priority Ranking:** 11**Project Summary:** This project designs a new academic building of 100,000 new square feet and renovation of 70,100 existing square feet to allow demolition of Armstrong Hall (144,000 square feet).**Project Description**

This project replaces Armstrong Hall, the most heavily used and worn out classroom building on campus, through construction of a new, smaller building and renovation of existing space. The project results in a net reduction of 44,000 sq. ft. in our building inventory and drives a higher overall utilization of existing academic space. The reduction of campus square footage will be accomplished with implementation of student-focused space use and scheduling principles and increasing Minnesota State Mankato's space utilization. Once implemented, the scheduling principles will increase weekly room use from 32 to 38 weekly room hours as well as improve student access to the classes they desire and need for their selected graduation track. The demolition of Armstrong Hall will remove over \$24,000,000 of deferred maintenance and eliminate several building code and ADA deficiencies.

The Armstrong Hall Replacement project is a phased design, construction, renovation and demolition project that results in a net reduction of campus space by 44,000 sq. ft. The project includes 100,000 sq. ft. of strategically located new construction and renovates 68,000 sq. ft. of existing campus space to relocate the Armstrong Hall program. The final phase demolishes the 144,000 sq. ft. Armstrong Hall building. Renovation includes the buildout of 18,000 sq. ft. in the basement of the new Clinical Sciences Building and repurposing approximately 70,000 sq. ft. of existing campus space with a bulk of it in the Library. The reduction of square footage is accomplished through implementation of new scheduling principles, rightsizing of classrooms, and repurposing of space to improve space use efficiency.

The design of the replacement space relies on weekly classroom use hours (WRH) increasing from average of 32 WRH to 38 WRH. The number and sizes of the classrooms support the campus goals for minimum class sizes and increase minimum seat utilization of 75%. Minimum class size determined by the strategic budget analysis results and calculated break-even point for cost of delivery.

Armstrong Hall currently contains the administrative offices for three of the seven campus colleges, including Arts and Humanities, Education, and Social and Behavioral Studies. All campus colleges make use of general classrooms in Armstrong Hall. The building supports 24 departments that provide 94 degree and certificate programs as well as the much of the general education requirements for all degree programs. Several of these programs contribute graduates for occupations on the list of high demand as defined by DEED, such as teachers, K12 special education, leadership and counseling.

This three-phase project culminates in the demolition of 1964-era Armstrong Hall and removes \$24,000,000 of backlogged deferred maintenance in that facility and corrects approximately \$6,000,000 of deferred maintenance backlog in the Library.

## **Project Rationale**

Armstrong Hall, built in 1964, is 144,000 sq. ft. and houses 49 of the 101 general classrooms and 24 academic departments from three colleges. Armstrong Hall is known as the “workhorse” of the campus and nearly every student that has attended the university has had at least one class in Armstrong Hall on their path to graduation. The campus has invested a significant amount of repair and asset preservation dollars to extend the life of existing systems but the size, scope and cost to perform wholesale replacement has prevented our ability to renew the facility. The result now is most of the 54-year-old building infrastructure is completely worn out and requires extensive renovation and renewal work to remain code compliant and provide a healthy productive environment. The building currently has an FCI of .46 and backlog of over \$24,000,000 of deferred maintenance.

In acknowledgement of the facility need for this building, the campus has performed to prior predesigns with different approaches to deal with the outdated and worn out facilities. In 2016 the University completed a predesign evaluating the concept of constructing an addition for swing space and then renewing the existing building. This approach added too much square footage, cost too much and presented some difficult logistics to overcome. In 2018 the campus completed a second predesign to evaluate the concept of renewing the existing building only. This predesign revealed that a renewal would cost an estimated \$43,000,000 (total project cost) to address all deferred maintenance and make the building code compliant. A renewed Armstrong Hall would not serve modern pedagogy well for the next 30 years. The existing building design has narrow column spacing, lack of windows, and low floor to ceiling height making it a poor foundation for creating right sized flexible learning spaces. When considering the ratio of amount of investment to possible outcomes and the complicated logistics of repair, we have concluded the building is not worth the cost to repair and would not serve today’s classroom pedagogy even if completely renewed.

In 2017 the campus embarked upon a new strategy that started with a campus wide academic space analysis to see if the opportunity existed to replace Armstrong Hall with a smaller building. Results of the study showed MSU Mankato is actually fairly well utilized when compared to peer institutions within the Minnesota State system and meets most of the system minimum guidelines for space utilization. It was also noted that the space program in Armstrong Hall is very compressed with very small offices and densely occupied classrooms at approximately 18 sq.ft. per student. Despite the evidence that our campus is already meeting utilization standards Minnesota State, Mankato has chosen to go beyond the minimum standards of space utilization. This funding request represents a commitment by the university to replace Armstrong Hall and reduce the overall campus square footage.

## **Project Timeline**

This project consists of 3 phases. Phase 1 designs all construction through Design Development.

07/2020: Phase 1 funding anticipated

07/2020-08/2020: Designer selection

09/2020-06/2021: Schematic Design, Design Development (all phases)

06/2021-11/2021: Construction Documents (new building and Clinical Sciences renovation)

10/2021: Bidding and award, Clinical Sciences renovation

11/2021-03/2022: Construction (Clinical Sciences reno)

07/2022: Phase 2 funding anticipated

07/2022-01/2023: Construction Documents (additional renovations)

09/2022-10/2022: Bidding (new building)

11/2022-12/2023: Construction (new building)

07/2024: Phase 3 funding anticipated

08/2024-09/2024: Bidding (additional renovations)

10/2024-03/2025; 06/2025-12/2025: Phased construction (additional renovations)

07/2025-11/2025: Construction documents (old Armstrong Hall demolition)

11/2025-12/2025: Bidding (demolition)

12/2025-06/2026: Demolition and landscape reconstruction (old Armstrong Hall)

### **Other Considerations**

The existing Armstrong Hall roof is 30 years old, which is 10 years beyond the expected 20 year life for EPDM rubber roofs, and while it is defying all odds for longevity it is reasonable to expect this will need to be replaced prior to the demolition phase if the project is not funded for design in 2020. The HVAC system has interior lined insulated ductwork. The ductwork has been cleaned and coated with an encapsulating material several times; however, the insulation is deteriorating beneath the coating and still breaking loose causing a black dust out of the air diffusers. The duct may be beyond repair by any additional coating and could result in exposure to air quality complaints. The exterior stone window lintels are deteriorating and have resulted in cracked and spalling stone falling to the ground. Thirteen window units were replaced in the past and we will likely have to replace several more. The building is code deficient in both ADA compliant restrooms and total number of restroom fixtures. The building is simply worn out and action needs to be taken to either invest millions of dollars to repair or replace it before the disrepair forces undesired emergency and reactive expenditures.

### **Impact on Agency Operating Budgets**

The final completion of this project will reduce the campus square footage by 44,000 GSF and replace 100,000 GSF of inefficient 1960s-era building space with a new highly efficient building, resulting in a significant drop in building utility expenses and reduced load on existing infrastructure. Overall staffing impact is expected to be neutral with the added classroom cleaning load in the library and need for additional technician skills required for the new systems in the new building. In our expectation staffing will reduce by one custodial position to accommodate the addition of a electrician/electronics specialist position. Campus funds building R & R at \$1 per square foot and will result in a reduction of \$44,000 in the R & R fund by the completion of all phases.

### **Description of Previous Appropriations**

None.

### **Project Contact Person**

Paul Corcoran

Assistant Vice President for Facilities Management

507-389-6802  
paul.corcoran@mnsu.edu

(\$ in thousands)

## Minnesota State University, Mankato - Armstrong Hall Replacement

## PROJECT FUNDING SOURCES

Funding Source	Prior Years	FY 2020	FY 2022	FY 2024
<b>State Funds Requested</b>				
General Obligation Bonds	\$ 0	\$ 6,691	\$ 56,462	\$ 28,722
<b>Funds Already Committed</b>				
Other State Funds	\$ 150	\$ 0	\$ 0	\$ 0
<b>Pending Contributions</b>				
<b>TOTAL</b>	<b>\$ 150</b>	<b>\$ 6,691</b>	<b>\$ 56,462</b>	<b>\$ 28,722</b>

## TOTAL PROJECT COSTS

Cost Category	Prior Years	FY 2020	FY 2022	FY 2024
Property Acquisition	\$ 0	\$ 0	\$ 0	\$ 0
Predesign Fees	\$ 0	\$ 0	\$ 0	\$ 0
Design Fees	\$ 0	\$ 0	\$ 0	\$ 0
Project Management	\$ 0	\$ 0	\$ 0	\$ 0
Construction	\$ 0	\$ 0	\$ 0	\$ 0
Relocation Expenses	\$ 0	\$ 0	\$ 0	\$ 0
One Percent for Art	\$ 0	\$ 0	\$ 0	\$ 0
Occupancy Costs	\$ 0	\$ 0	\$ 0	\$ 0
Inflationary Adjustment	\$ 0	\$ 0	\$ 0	\$ 0
<b>TOTAL</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>

## IMPACT ON STATE OPERATING COSTS

Cost Category	FY 2020	FY 2022	FY 2024
IT Costs	\$ 0	\$ 0	\$ 0
Operating Budget Impact (\$)	\$ 0	\$ 0	\$ 0
Operating Budget Impact (FTE)	0.0	0.0	0.0

## SOURCE OF FUNDS FOR DEBT SERVICE PAYMENTS

	Amount	Percent of Total
General Fund	\$ 4,461	67 %
User Financing	\$ 2,230	33 %

**STATUTORY REQUIREMENTS**

The following requirements will apply to projects after adoption of the bonding bill.

<b>Is this project exempt from legislative review under M.S. 16B.335 subd. 1a?</b>	
<b>Predesign Review (M.S. 16B.335 subd. 3):</b>	
Does this request include funding for predesign?	
Has the predesign been submitted to the Department of Administration?	
Has the predesign been approved by the Department of Administration?	
<b>Will the project design meet the Sustainable Building Guidelines under M.S. 16B.325?</b>	
<b>Will the project designs meet applicable requirements and guidelines for energy conservation and alternative energy sources (M.S. 16B.335 subd. 4 and 16B.32)?</b>	
<b>Have Information Technology Review Preconditions been met (M.S. 16B.335 subd. 5 &amp; 6 and 16E.05 subd. 3)?</b>	
<b>Will the project comply with the targeted group purchasing requirement (M.S. 16C.16 subd. 13)?</b>	
<b>Will the project meet public ownership requirements (M.S. 16A.695)?</b>	
<b>Will a use agreement be required (M.S. 16A.695 subd. 2)?</b>	
<b>Will program funding be reviewed and ensured (M.S. 16A.695 subd. 5)?</b>	
<b>Will the matching funds requirements be met (M.S. 16A.86 subd. 4)?</b>	
<b>Will the project be fully encumbered prior to the Cancellation Deadline (M.S. 16A.642): December 31, 2024?</b>	
<b>M.S. 16A.502 and M.S. 16B.31 (2): Full Funding Required</b>	
<b>M.S. 473.4485: Guideway Project</b>	
Is this a Guideway Project?	
Is the required information included in this request?	