

**SOUTH DAKOTA BOARD OF REGENTS**

**Budget and Finance**

**AGENDA ITEM: 7 – J**

**DATE: April 3-4, 2024**

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**SUBJECT**

**NSU Gerber Hall Renovation Facility Program Plan (FPP) and Facility Design Plan (FDP)**

**CONTROLLING STATUTE, RULE, OR POLICY**

[SDCL § 5-14-1](#) – Classification of Capital Improvements

[SDCL § 5-14-2](#) – Supervision by Bureau of Administration of Capital Improvement Projects – Payment of Appropriated Funds

[SDCL § 5-14-3](#) – Preparation of Plans and Specifications for Capital Improvements – State Building Committees – Approval by Board or Commission in Charge of Institution

[BOR Policy 6.4](#) – Capital Improvements

[BOR Policy 6.6](#) – Maintenance and Repair

**BACKGROUND / DISCUSSION**

Northern State University (NSU) requests approval of this combined Facility Program Plan (FPP) and Facility Design Plan (FDP) for the renovation of Gerber Hall. The Board approved NSU’s Preliminary Facility Statement for this project in May of 2023.

**IMPACT AND RECOMMENDATIONS**

Gerber Hall is home to Millicent Atkins School of Education. Departments within the School of Education are Teacher Education, Sports Sciences, Psychology, and Counselor Education. Offices and counseling lab space occupy the lower level of the two-story building. The upper level includes four classrooms, a conference room, and additional faculty offices. The existing elevator serves all three levels, but gaining access to the elevator is difficult.

Approximately 17,500 total square feet will be renovated, at a cost of approximately \$5,000,000. During the 2023 legislative session, \$2.5 million in state general funds were appropriated for this project, with an additional \$2.5 million in match to be funded with \$750,480 from HEFF M&R and state general fund M&R of \$1,749,520.

(Continued)

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**DRAFT MOTION 20240403\_7-J:**

I move to approve the combined Facility Program Plan and Facility Design Plan for NSU’s Gerber Hall renovation to be funded with a combination of general fund and HEFF M&R.

The GMP will be established in April. Faculty and staff will move to temporary offices on campus at the conclusion of the spring semester. Construction will begin in late May 2024 and will be completed in March/April of 2025.

The project budget is as follows:

| <b>Project Costs</b>            |                    |
|---------------------------------|--------------------|
| <b>Construction Costs</b>       | <b>\$4,037,751</b> |
| Soft Costs                      |                    |
| Professional Services           | \$380,875          |
| Furniture, Fixtures & Equipment | 380,000            |
| Owner Contingency               | 201,374            |
| <b>Total Soft Costs</b>         | <b>\$962,249</b>   |
| <b>Total Project Costs</b>      | <b>\$5,000,000</b> |

Additional details of the combined Facility Program Plan and Facility Design Plan can be reviewed in Attachment I.

**ATTACHMENTS**

Attachment I – NSU Gerber Hall Combined FPP and FDP

**Northern State University  
Gerber Hall Renovation  
Facility Program Plan and Facility Design Plan**

Northern State University requests approval of this combined Facility Program Plan and Facility Design Plan for the renovation of Gerber Hall. The Preliminary Facility Plan was approved by the Board of Regents in May of 2023. The project cost is \$5 million. During the 2023 Legislative Session, \$2.5 million in state general funds was appropriated for the project. The remaining \$2.5 million match will be funded with \$750,480 from HEFF, and state general fund M&R of \$1,749,520.

The architectural design narrative and drawings included in this Facility Design Plan were provided by CO-OP Architecture along with mechanical and electrical design details provided by Sichmeller Engineering and IMEG. Huff Construction is the Construction Manager for the project.

**A. Architectural, Mechanical, and Electrical Design**

Gerber Hall is home to the Millicent Atkins School of Education. Departments within the School of Education are Teacher Education, Sports Sciences, Psychology, and Counselor Education. Offices and counseling lab space occupy the lower level of the garden-level, two story building. The upper level includes four classrooms, a conference room and additional faculty offices. Restrooms are located on each floor. The existing elevator serves all three levels but gaining access to the elevator is difficult.

The Gerber Hall Renovation project will redefine its interior space. This 17,500 square foot project is designed to transition from a compartmentalized environment to an open, welcoming space that invites natural light deep into the center of the building. NSU hopes to foster an accessible, interconnected, and vibrant educational setting that supports the needs of students, staff, and visitors.

A driving design priority is accessibility. A new elevator will ensure that entry to Gerber Hall is accessible to everyone, while updated restrooms will enhance ease of access. Improved wayfinding throughout the building will create an intuitive and navigable space for all users.

Another key objective is to create a visible and functional connection between the west and east portions of the historic building. This will not only unify the space but also encourage a sense of community and interaction among the building's occupants.

Recognizing the importance of social and academic interaction, the Gerber Renovation Project introduces lounge spaces that are conducive to study, collaboration, and relaxation. These areas will be balanced throughout the building to maximize use, providing comfortable and inviting environments for students and staff to connect and collaborate, or to instead study in private.

The renovation utilizes materials and finishes that will enhance the functionality and aesthetics of the space. Frosted vinyl will be applied to the glazing of classrooms and offices, allowing natural light to enter the core of the building while ensuring privacy. Finishes throughout the building will feature a blend of white oak and Formica solid surfaces, chosen for durability and appearance. Sherwin Williams paints will be used throughout, creating a welcoming environment that aligns with NSU's marketing strategies. The restrooms will be finished with high-quality ceramic and porcelain tiling, finishes chosen again for durability and aesthetics. To tie into existing spaces and enhance the acoustical comfort within the building, acoustical ceiling solutions from Armstrong and Acoufelt will be implemented.

This project aligns with the evolving needs of the university, while also giving respect to one of the school's founding disciplines. With a focus on accessibility and connectivity, Gerber Hall will be an environment that supports excellence in education, fosters collaboration, and welcomes all who enter.

### ***HVAC SYSTEM:***

The existing air handling system (updated in the year 2000) consists of multiple air handling units for each building area to accommodate their various locations, and their HVAC requirements unique to that area of the building. Pending building layout changes, as much of the existing HVAC system will be reused as possible with modifications as necessary to accommodate floor plan changes and new controls to improve comfort.

Each of the three existing Air Handling Units (AHU's) provides the morning warmup heat, all cooling, and all ventilation requirements of the facility by supplying air to variable air volume boxes (VAV's) with hot water reheat coils. The AHU's utilize hot water heat during the heating season or chilled water cooling during the cooling season, and incorporate a supply fan section with VFD, an air blender, full economizer (free outside air cooling during hot water heating season) from a stationary intake louver, and a separate return fan section with VFD providing full relief through a stationary relief louver. Existing air handlers to remain with new DDC temperature controls and VFD's.

The mechanical penthouse is located on the west end/attic level with two air handlers, and a third is located east end/second floor. Existing mechanical rooms to remain.

### ***Individual Zone Control***

Each individual zone has a VAV box located above accessible ceilings or within mechanical rooms. If a zone calls for cooling the VAV box damper opens up and allows the 55-62 degree air to enter the zone from the air handler satisfying its cooling requirements. If the zone is calling for heat, the VAV box damper opens up to its heating position and the reheat coil is used to heat the air to satisfy the zone's heating requirements. When there is no call for heating or cooling, the VAV provides for proper ventilation air & utilizes the VAV reheat coil to prevent overcooling. Existing VAV's will be utilized where possible, but where floor plan changes require, changes to VAV's will be required (adding/removing as necessary, twinning, etc.).

Supplemental cabinet unit heaters are utilized to offset infiltration in high traffic locations with exterior doors, and at all vestibules. These would be maintained as part of the remodel or reused as possible with modifications as necessary to accommodate floor plan changes and new controls to improve comfort.

Supplemental baseboard radiation heat serves perimeter areas where necessary. The locations and sizes of baseboard radiation would be adjusted based on the proposed remodel floorplan.

A ductless split system will be added to serve the new IT room to provide year-round cooling for the IT equipment. Heat will be rejected to the second-floor air handler room to mitigate roof ice issues with rejecting heat to the attic in the winter.

### *Hydronic Heating Water Heating System*

The hydronic piping consists of an insulated, two-pipe hydronic hot water loop that uses circulating pumps to circulate heating water to the AHU, VAV's, CUH's, and finned tube radiation where applies. Heat is injected to the hot water heating loops as needed by using the existing steam to hot water heat exchangers located in the first-floor mechanical room. One existing heat exchanger serves existing reheat coils on VAV's, one existing heat exchanger serves heating coils on existing air handlers and existing supplemental heat.

Existing heating pumps show damage from age and hydronic leaks and will be replaced.

All heating system temperature control valves will be updated to new DDC temperature control valves, installation by the hydronics contractor.

The Heating Water Glycol Solution has been assessed and is recommended to be disposed of and replaced. The VAV Reheat Water Glycol Solution has been assessed and is in need of corrections to be made acceptable for continued use.

### *Hydronic Chilled Water System*

The chilled water system is served by an air-cooled chiller installed in a mechanical yard on the south side of the building. The chilled water circulating pump, air separator, and expansion tank on the chilled water loop are located in the attic mechanical room located on the west end. Piping revisions required due to floor plan changes will be rerouted as necessary.

The existing chilled pump shows damage from age and hydronic leaks and will be replaced.

Existing air handlers and chilled water system temperature control valves will be updated to new DDC temperature control valves.

The Chilled Water Glycol Solution has been assessed to be sufficient for continued use.

### *Ventilation Systems*

Continuous exhaust is provided in code required areas such as storage rooms and restrooms. Existing separate exhaust fans provide exhaust for the restroom groups and associated janitorial/storage areas and will not be replaced. Exhaust ductwork will be updated where required for the floor plan changes. Fans will continue to be controlled by the BAS system.

### *Temperature Control System*

The temperature controls are in need of updating and will consist of a new web-based direct digital control system with a graphics interface for changing setpoints and monitoring and will have remote access capability for owner designated personnel. The existing system can only be accessed with Windows<sup>TM</sup> 7 based computers and has become difficult to maintain. The new system would also replace the control valves for the heating/chilled hydronics equipment, replacing VFD's for the fans and pumps, updating all thermostats throughout, and updating all sensors and actuators on all three existing air handlers to improve comfort and serviceability.

***HVAC WARRANTIES***

The mechanical contractor shall warrant his work against failure and workmanship for a period of at least one year from the date of substantial completion. Any work that is defective within that one-year period shall be replaced by the Contractor without charge. If longer/special warranties are noted elsewhere in the specifications, those warranties shall apply.

***PLUMBING SYSTEM:***

The plumbing systems consists of the following:

*Sanitary Sewer Service*

The facility will continue to use the existing 4” sanitary sewer service installed in 2000.

*Domestic Water Service and Dedicated Fire Sprinkler Water Services*

The existing domestic water service, riser, and meter fit are installed in a first-floor mechanical room were installed in 2000. The fire sprinkler service is installed in the same room with a fire sprinkler riser and zone valves. These water services will remain as-is.

*Plumbing Fixtures*

Existing fixtures will be replaced.

Wall hung photo-eye operated flush valve toilets and wall mount urinals will be provided. Manual lever operated faucets will be utilized for lavatories. Wall mount manual soap dispensers would be by others.

*Cooling Condensate Drainage*

Existing condensate drain piping from the Air Handling Units will remain as is. Condensate from IT ductless split will drain to a new floor sink.

***FIRE SPRINKLER SYSTEM:***

The complete fire sprinkler system will be maintained meeting NFPA, local codes, & the Fire Marshal’s requirements. The fire sprinkler system is fed from a dedicated fire sprinkler service installed in the water service room. The attic is protected by a “dry” system that has issues with pipe corrosion and leaking. The wet system will be reworked and extended as necessary to accommodate floor plan changes.

**By Add Alternate:** The attic dry system will be replaced as required to replace the existing damaged piping.

***ELECTRICAL:***

LED luminaries will be used throughout the building. Fixtures will be chosen based on photometric analysis for the space to address optical performance, quantity, and efficacy of fixtures. Where applicable, lighting controls will be installed to achieve automatic shut-off using timeclock-controlled fixtures, vacancy sensors and occupancy sensors. Manual override switches will be installed in each room. Emergency egress lighting will be installed in main corridors and

open areas. Exit signs will be LED and emergency battery-powered luminaries will be installed in mechanical and electrical rooms.

The existing fire alarm system is obsolete and will be replaced with an addressable fire alarm panel. Each initiating device, including manual pull stations, will have their own unique address and report to the fire alarm control panel. Addressable monitor modules will be used to monitor sprinkler flow and tamper valve position. The existing campus fire alarm system is connected to the Johnson Control system and the fire alarm system will require relays for interconnection to that system.

#### **B. Impact to existing campus-wide heating, cooling, and electrical systems**

Gerber Hall is currently served by the central heating plant and the campus electrical loop. The renovation will have no impact on these systems.

#### **C. Impact to M&R and Operational Costs**

The annual maintenance and repair costs will be funded from the annual HEFF allocation.

Operational support for the building will remain consistent with current costs as the same amount of space will be utilities. However, updated DDC temperature controls for heating and cooling systems will decrease utility consumption and reduce utility costs.

#### **D. Project Budget**

| <b>Project Costs</b>            |                    |
|---------------------------------|--------------------|
| Construction Costs              | \$4,037,751        |
| Soft Costs                      |                    |
| Professional Services           | \$380,875          |
| Furniture, Fixtures & Equipment | 380,000            |
| Owner Contingency               | 201,374            |
| Total Soft Costs                | \$962,249          |
|                                 |                    |
| <b>Total Project Costs</b>      | <b>\$5,000,000</b> |

#### **E. Timeline**

The Guaranteed Maximum Price (GMP) will be established in April. Faculty and staff will move to temporary offices on campus at the conclusion of the spring semester. Construction will begin in late May 2024 and be completed in March/April of 2025.

#### **F. Illustrative Floor Plans – attached**

### First Floor



**Second Floor**



