


**MICHIGAN STATE**  
**U N I V E R S I T Y**

February 2, 2011

**MEMORANDUM**

**To:** Trustee Finance Committee

**From:** Fred L. Poston 

**Subject:** **Project Approval - Authorization to Proceed**  
Library - Chiller Replacement

**RECOMMENDATION**

BE IT RESOLVED that the Trustee Finance Committee recommends that the Board of Trustees authorize the Administration to proceed with the project entitled Library - Chiller Replacement, and to approve a budget of \$9,500,000.

**BACKGROUND**

**Program Need:**

MSU owns more than 4,500,000 volumes and 33,000 publications, along with maps, recordings, and other resources. The Main Library, adjacent to Olds Hall, is the central hub for the MSU knowledge base, on-campus research, and quiet study for the MSU community. The Main Library houses many items that, due to their age, require specific temperature and humidity criteria be met to sustain preservation. This is accomplished using steam absorption chillers to create chilled water for the building's HVAC system. During a maintenance inspection of the chillers, it was discovered that significant components of the chillers had reached the end of their service life. One chiller failed to start, requiring repairs to make it functional for summer 2010. In addition, a recent study concluded that the cooling load has increased such that there is no longer system redundancy to sustain operations during a maintenance event.

**Description of the Project:**

The Library is located on West Circle Drive, between IM Sports Circle and Olds Hall, in the north academic district. This project involves a complete replacement of the building's chilled water system and will include excavation of the south and west sides of the east wing; complete demolition of the absorption machines, chilled water pumps, piping throughout the basement mechanical room, and the cooling towers; new below-grade enclosure on the west side of the east wing for the new electrical substation; expansion of the area along the south side of the east wing for chiller installation; new electrical substation transformers and equipment to serve the additional electrical demand in the building; new steam absorption chillers,



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pumps, and cooling towers; replacement of sections of steam distribution piping in the steam tunnel leading to the Library, possibly including partial tunnel excavation; replacement of four separate air handling units in the west wing to be replaced with a single, variable volume air handling unit; electrical service connections to equipment; HVAC control connections; system balancing; and site restoration upon completion of the project, including, but not limited to, sidewalks, plantings, sections of parking Lot 11 to the south of the building, installation of a pedestrian speed table across the service drive, and the creation of a barrier-free, universal plaza leading to the south entrance of the building.

The Architect/Engineer is DiClemente Siegel Design.

Based on an assessment of the factors stated in the Project Planning and Approval process concerning Project Labor Agreements (PLA), the Vice President for Finance and Operations and Treasurer has determined that a PLA would not be required for this project.

**Communication Feedback:**

The campus community was given opportunities to provide feedback during the planning phase; concerns have been addressed in the project design.

The Office of Campus Planning and Administration has reviewed this project and found it to be consistent with the Campus Master Plan and Planning Principles. The Campus Infrastructure Planning Work Group also supports the recommendation to proceed with the project.

As construction proceeds, the schedule and phasing will be reviewed with the campus community.

**Project Cost and Timetable:**

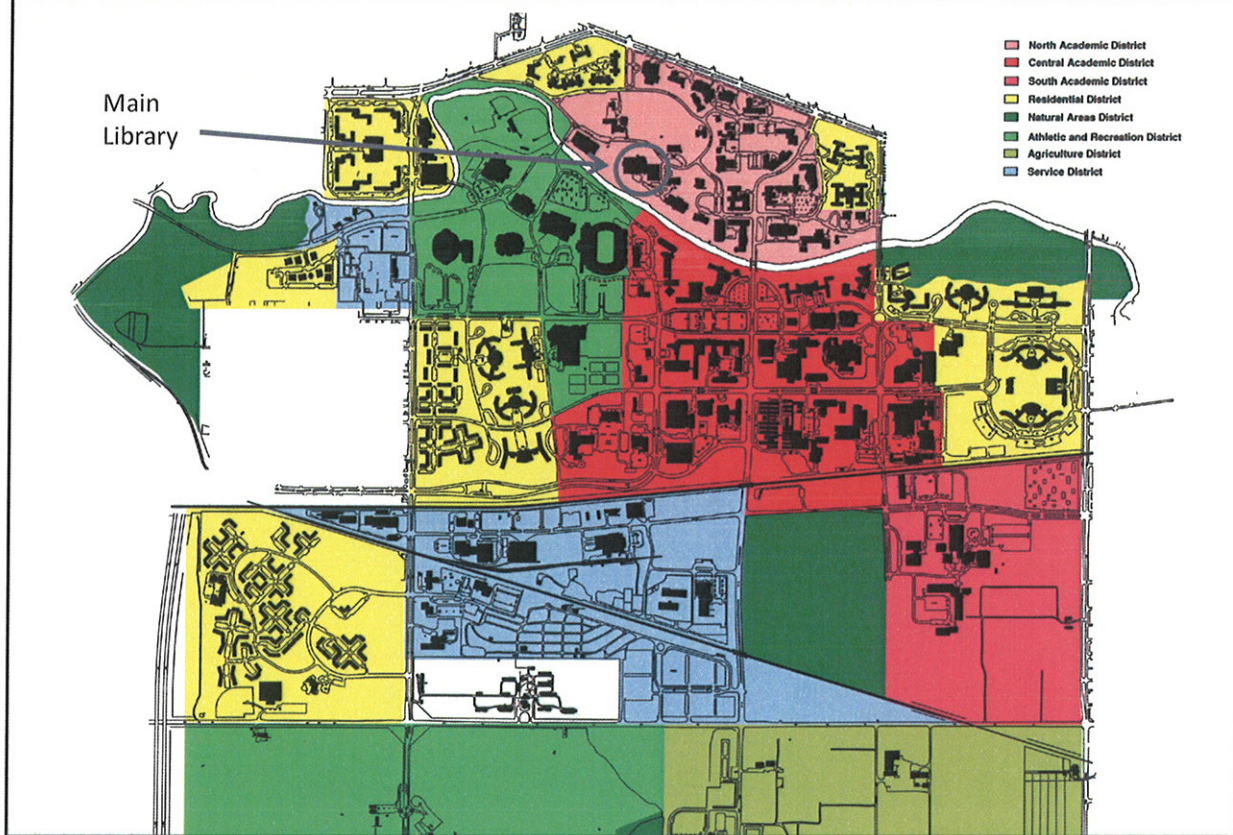
The budget for this Design-Bid-Build project is \$9,500,000, which is being funded by the General Fund - Just-in-Time.

Construction is planned to begin in July 2011, with substantial completion in April 2012, and final completion in November 2013.

cc: D. Brower, R. Flinn, J. Kacos, G. Klein, B. Kranz, K. Lindahl, M. McCabe,  
J. Mumma, R. Nestle, D. Quinney, C. Haka, K. Neils

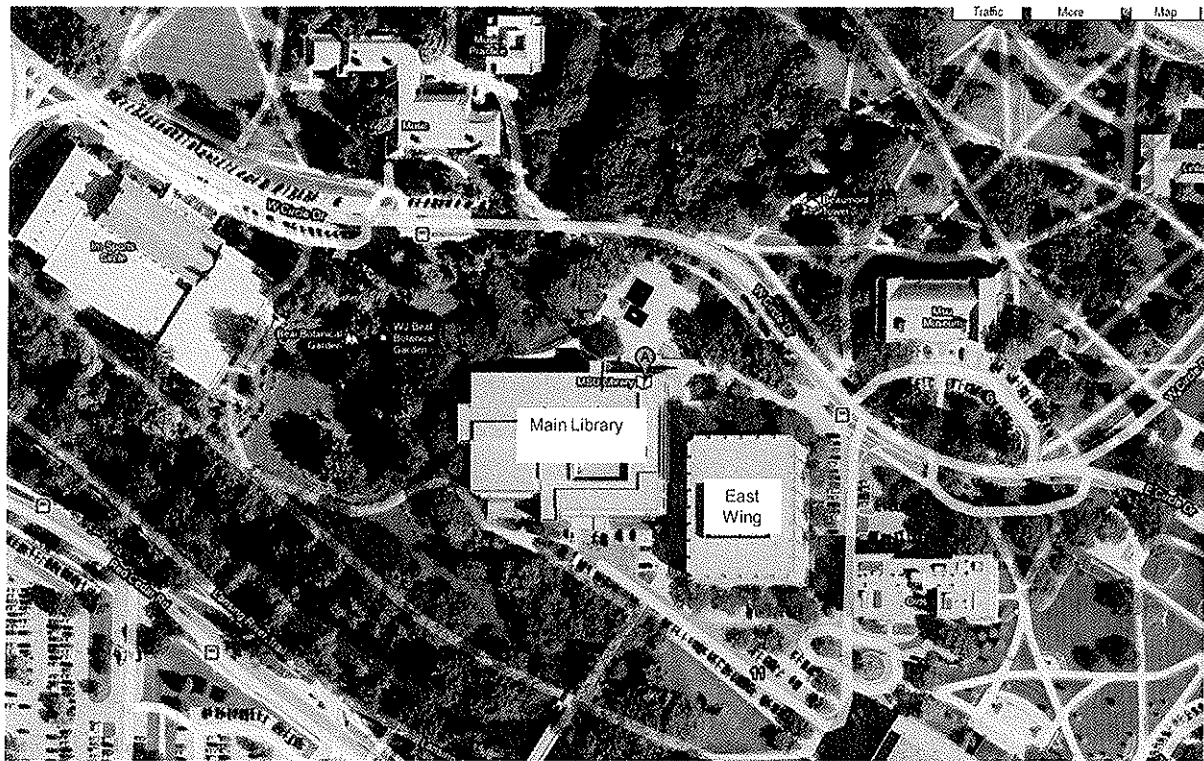
Project Approval – Authorization to Proceed  
Library – Chiller Replacement

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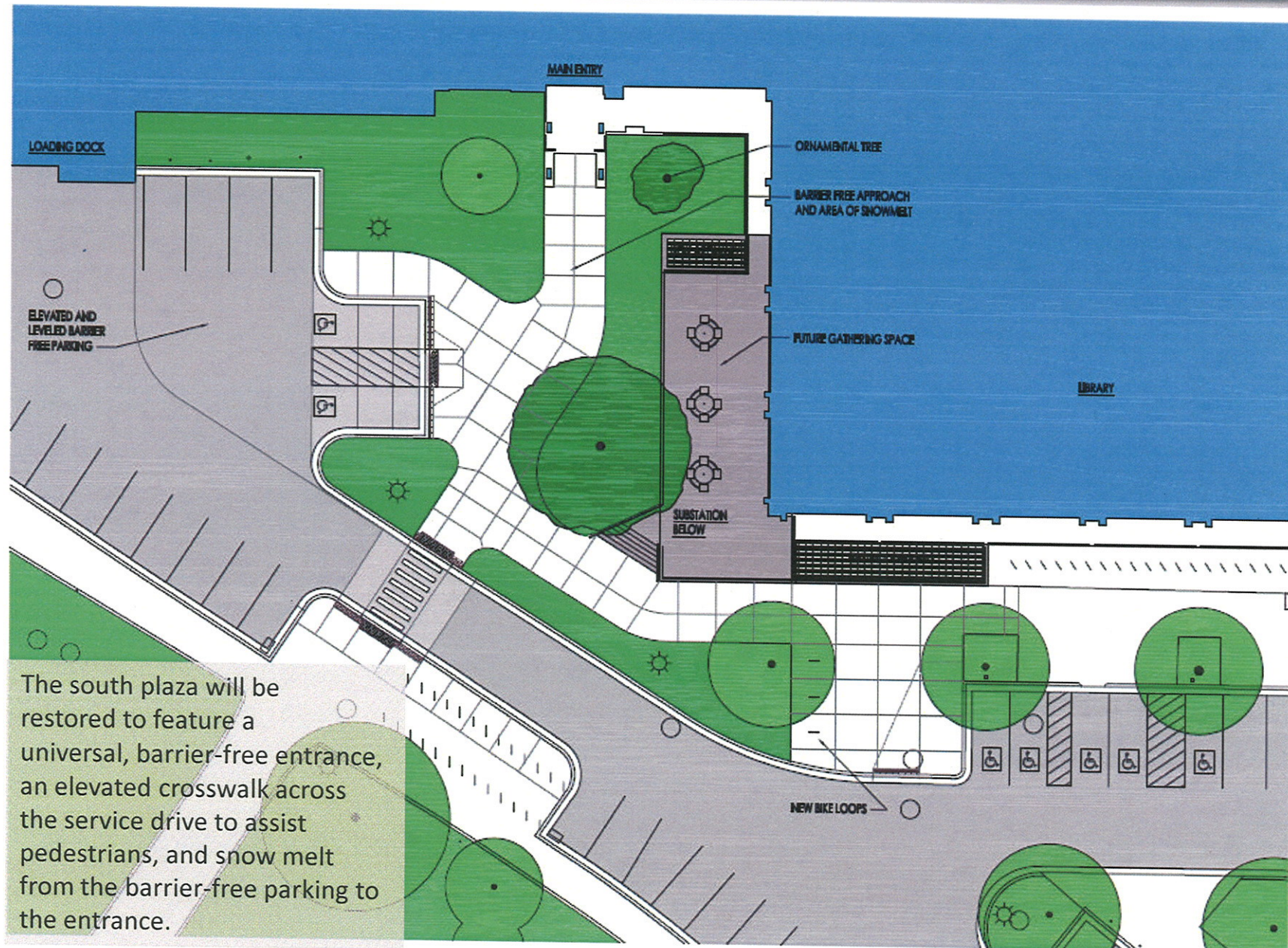


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Library – Chiller Replacement

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# Project Approval – Authorization to Proceed Library – Chiller Replacement

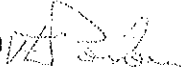


# Background Information

**MICHIGAN STATE  
UNIVERSITY**

September 8, 2010

**MEMORANDUM**

**To:** Trustee Finance Committee  
**From:** Fred L. Poston   
**Subject:** **Authorization to Plan**  
Library - Chiller Replacement



**RECOMMENDATION**

BE IT RESOLVED that the Trustee Finance Committee recommends that the Board of Trustees authorize the Administration to plan for the project entitled Library - Chiller Replacement.

**BACKGROUND**

**Program Need:**

MSU owns more than 4,500,000 volumes and 33,000 publications, along with maps, recordings, and other resources. The Main Library, adjacent to Olds Hall, is the central hub for the MSU knowledge base, on-campus research, and quiet study for the MSU community. The Main Library houses many items that, due to their age, require specific temperature and humidity criteria be met to sustain preservation. This is accomplished using steam absorption chillers to create chilled water for the building's HVAC system. During a maintenance inspection of the chillers, it was discovered that significant components of the chillers had reached the end of their service life. One chiller failed to start, requiring repairs to make it functional for summer 2010. In addition, a recent study concluded that the cooling load has increased such that there is no longer system redundancy to sustain operations during a maintenance event.

**General Description of the Project:**

The planning of this project is anticipated to include a complete replacement of the building's chilled water system and will include the following: excavation of the south and west sides of the east wing; complete demolition of the absorption machines, chilled water pumps, piping throughout the basement mechanical room, and the cooling towers; new below-grade enclosure on the west side of the east wing for the new electrical substation; expansion of the area along the south side of the east wing for chiller installation; new electrical substation transformers and equipment to serve the additional electrical demand in the building; new steam absorption chillers, pumps, and cooling towers; electrical service connections to equipment; HVAC control connections; system balancing; and site restoration upon completion of the project, including, but not limited to, sidewalks, plantings, and sections of parking Lot 11, south of the building. The planning of this project may impact the footprint.



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The Main Library is located on West Circle Drive, between IM Sports Circle and Olds Hall in the North Academic District. The location of this project is consistent with the Campus Master Plan and Planning Principles.

Based on an assessment of the factors stated in the Project Planning and Approval process concerning Project Labor Agreements (PLA), the Vice President for Finance and Operations and Treasurer has determined that a PLA would not be required for this project.

**Communication Plan:**

During the planning phase, the campus community will be given opportunities to provide feedback on the project as it is being designed. Input from the project planning team will be solicited during the design phase.

**Preliminary Project Cost Information:**

Based on cost experience for similar projects and current pricing information, the preliminary project cost estimate is \$8,000,000. This estimate may change as planning progresses and the project scope is further defined.

The source of funds for the project is expected to be from the General Fund – Just-in-Time.

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J. Mumma, R. Nestle, D. Quinney, K. Neils

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