

**ILLINOIS STATE
UNIVERSITY**

**BOARD OF
TRUSTEES**

Resolution No. 2023.10/52
Authorization of MCNSC
Energy-Related Connection
to ISU Chilled Water Plant

Resolution

Whereas, the Illinois State University Master Plan 2010-2030, Item 53 Utilities Infrastructure, calls for “other work will be undertaken to ensure continuity of service reliability on campus, including the development of connections between district chiller groups”, and

Whereas, in 2016, Illinois State University (ISU) conducted an Engineering/Architecture Services Quality Based Selection (QBS) process and hired Stanley Engineering to design an “*ISU Chilled Water Loop Multi-Year Plan*” to interconnect the 5 existing separate chilled water systems for ISU central plant utilities for the main ISU Quad Campus, and

Whereas, to facilitate ISU building additions in 2018, a “first phase” new 800 Ton Chiller was installed in Chiller Plant System CP-6 and an underground chilled water connection was made between the SE Chiller Plant and the NE Chiller Plant systems, essentially taking the first step in the Stanley’s “*ISU Chilled Water Loop Multi-Year Plan*” for connecting separate Quad chilled water systems, and,

Whereas, the University plans to construct a 16,000 square foot addition to the Mennonite College of Nursing Simulation Center requiring an energy-related connection to the CP-2-BSC/Milner Chiller Plant (located in the Bone Student Center), and,

Therefore, be it resolved that the Board of Trustees authorizes expenditures not to exceed \$4.1 million for all necessary design and construction work to connect the new Mennonite College of Nursing Simulation Center to CP-2-BSC/Milner Chiller Plant and establish budgets, appoint architects and engineers, develop required designs and construction documents, advertise, receive bids, and then award contracts and undertake construction.

Board Action on: _____ Motion by: _____ Second by: _____ Vote: Yeas: _____ Nays: _____	Postpone: _____ Amend: _____ Disapprove: _____ Approve: _____
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ATTEST: Board Action, October 13, 2023

Secretary / Chairperson

**Board of Trustees
Illinois State University
Supplemental Information for MCNSC Energy-Related Connection to ISU Chilled Water Plant**

Background

The Illinois State University *Master Plan 2010-2030 Item 53 - Utilities Infrastructure* calls for *other work will be undertaken to ensure continuity of service reliability on campus, including the development of connections between district chiller groups*. Subsequently, in 2016, Illinois State University (ISU) conducted an Engineering/Architecture Services Quality Based Selection (QBS) process and hired Stanley Engineering to design an ISU Central Plant Chilled Water Loop System and to develop “*An ISU Chilled Water Loop Multi-Year Plan*” to interconnect the 5 existing separate chilled water systems for ISU central plant utilities for the main ISU Quad Campus.

The primary focus of Stanley’s work was interconnection of the 5 existing separate academic-focused Quad chilled water plant piping systems. The project intent was to increase ISU energy efficiency, reduce operating costs, and increase central plant reliability and redundancy for ISU’s Quad Chiller Plant cooling systems. Currently, there are six chilled water plants that serve the ISU campus buildings. These are:

- CP-1 -NE Chiller Plant (located in the Science Lab Building),
- CP-2 -BSC/Milner Chiller Plant (located in the Bone Student Center)
- CP-3 -Main Heat Plant Chiller Plant (located SW/Adjacent Schroeder Hall)
- CP-4 -South Chiller Plant (located on South University)
- CP-5 -NW Chiller Plant (located at Linkins Dining Center)
- CP-6 -SE Chiller Plant (Located South of Beaufort/Watterson Towers)

The Stanley interconnection project only included the five Quad systems that include the Southeast, Northeast, South Campus, North Campus , and the Bone/Milner Plants. It was determined the Northwest Plant (CP-5) was too remote to the main campus and would be too difficult and expensive to connect to this proposed central chilled water loop system.

Project Scope & Schedule

Currently ISU is in the construction phase for a new 16,000 square foot addition to the Mennonite College of Nursing Simulation Center (MCNSC). ISU energy conservation standards direct this building to be connected to the ISU Central Plant for utilities. Therefore, the plan is for this building to be connected to CP-2-BSC/Milner Chiller Plant (located in the Bone Student Center).

This project includes all necessary design and construction work to connect the new MCNSC to CP-2-BSC/Milner Chiller Plant’s Central Chilled Water and Steam utilities. To achieve the required MCNSC chilled water requirements, new chilled water piping will be connected into the Bone Student Center Mechanical Room CP-2 existing chilled water system. New chilled water piping will be routed through existing tunnels to the tunnel ground service access located at the SW corner of the BBC. From this location, new direct buried piping will be direct buried north to the new MCNSC to provide cooling for this building.

To achieve the required MCNSC heating requirements, new steam piping will be connected into the existing steam piping located in the tunnel ground service access located at the SW corner of the BBC. From this location, new direct buried piping will be run north to the new MCNSC to provide heating for this new building.

Upon project approval from the ISU Board of Trustees, ISU will complete project designs and award construction contracts. The current project plan is to complete the required work on or before August 1, 2024.

Resource Requirements

A/E Fees	\$ 150,000
Construction Costs	\$ 3,500,000
Contingency	\$ 450,000
Estimated Total Project Costs – Not to Exceed	\$ 4,100,000

Source of Funding: General Revenue Resources