PROJECT SHEET

Southwest Regional Chilled Water Plant

2026

ABOUT THIS PROJECT:

Market Segment:
Industrial Infrastructure / Water Holding Structures

Owner:
Michigan State University

Products Used:
Xypex Admix C-500 NF

Location:
East Lansing, Michigan, USA

Concrete Producer:
Shafer Redi Mix

General Contractor:
Granger Construction

Michigan State University constructed the Southwest Regional Chilled Water Plant to expand campus cooling capacity and support long-term infrastructure planning under the University's Vision 2050 integrated facilities and land use plan. The facility is designed to deliver efficient and reliable cooling to approximately 1.9 million square feet of west central campus buildings, including the Engineering and Digital Innovation Center and two residence halls.

The plant was initially designed to provide 3,800 tons of cooling capacity, with infrastructure in place to support future expansion. The system incorporates a combination of electric and steam turbine chillers housed within a large mechanical space located four stories below grade. Due to the elevated groundwater table at the site, the below grade concrete structures are subject to sustained hydrostatic pressure.

To address these conditions, Xypex Admix C-500 NF crystalline waterproofing admixture was incorporated into the concrete used for the mat slab and below grade walls. Approximately 1,100 bags of Xypex Admix C-500 NF were added during batching. More than 5,000 cubic yards of concrete containing Xypex admixture were placed during a continuous overnight pour lasting approximately 14 hours, supplied by two ready mix plants to maintain placement continuity.

The integral crystalline system provides permanent waterproofing and enhances durability, reducing permeability and protecting the structure against groundwater intrusion.

Based on the performance and benefits demonstrated on this project, Michigan State University has specified Xypex for two additional regional chilled water facilities planned to begin construction in 2026.