

# The University of Toledo

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## **Southwest Utility Upgrade:**

The University of Toledo created a project to remove the independent chilled water and steam boiler systems in each of five residence halls - The Crossings, International House, Academic House, Sullivan Center, and Parks Tower. The University is now able to supply, monitor, and cost chilled water steam to these buildings as they have been doing for many of the academic buildings on campus. A steam absorption chiller was installed in the Chiller Plant to help balance the natural gas consumption throughout the year to help control these costs.

## **Project Scope:**

Installed one 1200-Ton steam absorption chiller, two 2500 GPM cooling towers, four large capacity horizontal split case pumps, and associated piping in existing chilled water plant. Tie-ins were made to both the main high pressure steam header and condensate header in the Steam Plant. Chilled water, high pressure steam, and condensate systems were installed underground to the southwest campus where the residence halls are located. Existing steam boilers, chillers, and cooling towers were removed at each of the buildings. Piping and controls were installed to turn the building chilled water systems into tertiary systems that are fed from the secondary underground loop. Steam stations were installed for supply to existing domestic and heating water in the buildings.

## **Challenges:**

The Central Chilled Water Plant is located in the center of the existing Memorial Field House. The 1200 T chiller, which had a component that weighed 70,000 pounds, had to be moved across an existing wooden basketball court which was completed without any damage whatsoever. The steam and chilled water sources had to be changed out in each of the residence halls without any inconvenience to the occupants. This too was done successfully without a single complaint.

**Project Duration:** 8 Months

**Project Cost:** \$2.2 Million



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