CHILLED WATER SYSTEM OVERVIEW

GENERAL INFORMATION

1.1 The campus chilled water system presently serves the main campus of the University. Buildings on the east campus are served by individual chiller plants, generally located within the buildings themselves.

1.2 Chilled water distribution within some buildings is via a secondary chilled water pumping system; other buildings utilize the main chilled water loop pressure to deliver primary loop water.

1.3 Isolation valves must be provided where supply and return piping enters the building. NO equipment shall be installed between the Campus Loop system and the building shutoff valve. These valves will be under the control of the Campus Building Management System.

1.4 The University has a computer hydraulic model of the entire chilled water system that provides information on flows, pressures, etc. This information is maintained by an independent consultant. This model shall be utilized where the use of centralized chilled water is planned to determine subsequent system-wide effects.

1.5 Chilled water is presently available from April 15 thru November 1.

DESIGN REQUIREMENTS

2.1 The designer’s goal should be to design a system that can function as close as possible to variable flow, constant temperature drop over the entire load range.

2.2 Buildings with high static heads should not be directly connected to the chilled water system, but hydraulically isolated via plate heat exchanger(s).

2.3 Provide a chilled water meter at each building and tie into centralized system downstream of isolation valve, in accordance with Section 23 09 05 – Meters and Gauges. Chilled water usage including flow and temperature is to be monitored and recorded by the campus data acquisition system.
DESIGN REQUIREMENTS

2.4 All piping and components installed in the chilled water system must be rated for and tested to 200 psig.

2.5 Chilled water coils should be selected for an entering water temperature of 45°F and a 16°F temperature rise.

2.6 Fan coil units should have 3 row coil high capacity coils. Fan Coils shall be connected through a heat exchanger or a drainable loop.

REFERENCE