CHILLED WATER SUB-ELEMENT

Goal 1

Provide chilled water supply and return from a regional central plants to serve the air conditioning needs of the campus.

Objective 1A

Construct new regional chiller plant(s) and install chilled water equipment for the buildings designated as candidates for connection to a regional chilled water loop. As new buildings are designed and constructed, locations for regional chiller plants should be consider to group buildings that are near each other into common central systems. The existing buildings will continue to use their existing chilled water or direct expansion equipment until such time comes for the systems to be renovated and connected into the central loop.

Policy 1A-1

The State University System Professional Services Guide, FAU Cost Containment Guidelines shall be used by the Design Professional to ensure the minimum requirements for HVAC system design has been met for the design of any new or renovation project. The requirements shall be reviewed with the Design Professional at the commencement of the design. The review shall follow the procedures as set forth in the Cost Containment Guidelines.

Policy 1A-2

Regional chiller plants shall be designed such that it allows for a phased chiller plant expansion. Quantity and locations for regional chiller plants across the campus shall be planned and determined by the Design Professionals. Adequate space shall be provided to accommodate the anticipated maximum chiller plant capacity for each regional location.

Policy 1A-3

The preference for any new chilled water system installed on the campus is to utilize water cooled chiller equipment.

Policy 1A-4

FAU shall establish and adopt a level of service standard for chilled water supply which provides and maintains a maximum of 45 degrees chilled water supply temperature as required to meet the cooling needs of the buildings.

Policy 1A-5

Coordinate with new construction projects for their construction schedule, phasing and capacity requirements. When economically feasible, construct a new regional chiller plant or expand an existing plant to serve the needs of the new construction.

Policy 1A-6

Install site chilled water supply and return piping distribution from the plant to new building location. Site piping sizing shall take into consideration the anticipated total system flow at the maximum chiller plant capacity to ensure flow for future buildings and expansion. Initial plant piping distribution shall be coordinated with the master plan.
GOALS, OBJECTIVES AND POLICIES

ELEMENT 10 – Utilities Element

Policy 1A-7
A central energy management system (EMS) shall be installed to control and schedule the plant operation.

Objective 1B

Ensure proper site piping distribution is coordinated and the cooling demand of the campus is maintained. Measurement and verification system of the chilled water system flows and capacities will provide the capability to determine the plant operating conditions. Routine readings of the plant operating flows and capacities will make sure the plant is meeting the demand of the campus or provide indication that the system capacity requires expansion. Site piping distribution shall be such that it allows for future expansion.

Policy 1B-1
A measurement and verification system shall be installed at the central energy plant to provide trending of chiller plant peak demand for capacity and flow. Monthly reports shall be generated and maintained for reference.

Policy 1B-2
The central chiller plant capacity shall be evaluated by the design professional for any future building to be connected to the central plant. It shall be determined based on measurement and verification of the existing conditions along with the design requirements for the new building whether or not the central chiller plant shall require expansion.

Policy 1B-3
Routing and distribution of the chilled water piping through the campus as the system is expanded shall be coordinated with the Master Plan to ensure coordination with future building locations and other site utilities. Each new building shall be provided with a flow meter which is monitored through the central energy management system.

Policy 1B-4
Provide chilled water isolation valves in a valve access box for each existing building for the future connection when the building is renovated.

Policy 1B-5
Provide valve in valve box at the termination of each phase of the extension of the central chilled water loop. Provide flanged end for future extension of the loop.