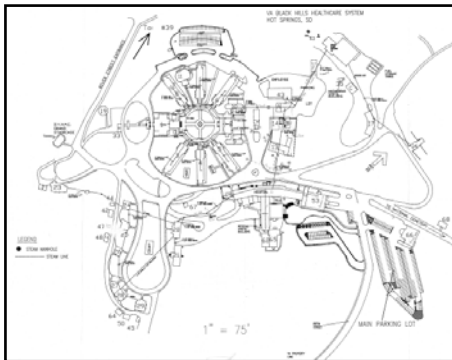


**VA Medical Center
Main Steam Distribution System Study and Replacement**



This project involved a study and upgrades to a 50+ year old steam distribution system throughout a 75 acre facility complex. The study identified and prioritized critical areas for steam piping removal and replacement. Both interior and buried exterior piping systems were reviewed. The facility distributes part of its high pressure steam through tunnels with the balance of the high pressure system distributed through approximately 1000 feet of buried piping.

Two projects developed from this study; one to replace an interior low pressure steam loop serving the hospital, and another to replace the main buried exterior line between the steam tunnel and the hospital.

Project Data

Location

Hot Springs, South Dakota

Building Type

Health Care

Building Area

75 Acre Campus Distribution
30,000 square foot Hospital

Mechanical Systems / Features

Steam Piping Distribution
PRV Station
Pre-Insulated buried piping

Completion Date

Scheduled for 2004

Skyline Engineering was commissioned to review the status of the 90 psig steam loop routed around the campus, distributing energy to the hospital, Domiciliary Complex, and numerous support buildings. The preliminary phase of the project involved the review of the capacity and condition of the steam distribution system along with identification and prioritization of steam piping in need of replacement. Probable costs of construction were developed for several different options including recommended improvements.

The study identified the Hospital East Wing as a priority for replacement of a low pressure steam distribution loop. A portion of the existing piping system within the facility was redesigned and replaced, while a new PRV station was also added to upgrade the pressure control capabilities between medium pressure and low pressure systems.

A major 400-foot section of the original buried high pressure steam distribution system was also identified for replacement. Skyline was able to design this primary connector through an alternate route allowing the original steam line to remain in service during construction maintaining operation of the hospital throughout the three month construction period. Maintenance of the replacement steam line was minimized by allowing the natural flexibility of the piping system to absorb expansion, eliminating the need for expansion joints or exterior manholes.

Construction began in September 2003 and will end in 2004.