

# CASE STUDY

## CAMBRIDGE HEALTH ALLIANCE



“We continued to track upward well after the projects were completed.”

— William J. McFarland, Sr. Director of Materials Management  
Cambridge Health Alliance

### Client’s Perspective

Cambridge Health Alliance is known for providing high-quality, culturally competent care to a large, diverse patient population. Somerville Hospital, part of the Cambridge Health Alliance system, needed a capital plan to address mounting energy costs, aged infrastructure, and problematic comfort and indoor air quality issues. The Somerville Hospital had a number of infrastructure related challenges including absence of Direct Digital Control (DDC) or Building Management System (BMS) systems, patient floors with outdated electric radiant heat systems, large windows providing a daily challenge for the heating balance, and overall concern for keeping patients in a comfortable environment.

### Challenge

Cambridge Health Alliance, serving Boston’s metro-north community, was faced with aging infrastructure, high energy and operational costs, potential code infractions, and occupant comfort issues at Somerville Hospital, one of the three hospital campuses integrated under their alliance.

### Solution

The Sodexo Energy and Construction Services team went to work on a satisfactory resolution by creating a central heating loop to convert patient areas from electric heat to hot water heat by oil and natural gas. Controls were installed that allowed access from each nursing station. Nurses were given the ability to check and adjust the temperature in the patient rooms from a wall-mounted touchpad located in the nurses’ station. The Building Management System addressed both patient comfort and operating efficiencies. Total projects implemented throughout the Cambridge Health Alliance included creation of a central heating loop, a new boiler, upgrade and conversion of outdated air handling units, a new high efficiency chiller, lighting upgrades, water conservation measures, automatic chemical feed treatment center, and an automated building management system that monitors the systems and equipment.

### Outcome

- Energy and operational annual savings of \$358,000
- Resolution of patient comfort and indoor air quality issues
- Renewed facility infrastructure
- Savings viewed over a 10-year period paid for 80% of the project

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