

MMED University Hospital Radiation Oncology Linear Accelerator Replacement



Project Description

The linear accelerator technology in Radiation Oncology treatment room B2C527 is aging and limiting the ability to improve patient throughput, convenience, and safety. This project will renovate the treatment room as well as part of the associated control and equipment rooms to accommodate installation of a new linear accelerator. The new accelerator will lead to several patient benefits, including faster and more efficient treatments using non-invasive positioning and real-time monitoring for improved patient safety. In addition, the chilled water system serving the linear accelerators in Radiation Oncology will be upgraded.

Energy Efficiency Measures

- New dedicated process chilled water loop to replace outdated and unreliable linear accelerator cooling systems. New system includes:
 - High efficiency pumps utilizing variable frequency drives
 - Fully automated DDC technology to monitor and adjust temperature and flow to maximize efficiency
 - Energy conservation motor technology to vary airflow based on demand
- Provide digital controls for new VAV boxes
- Use variable air volume systems
- High efficiency LED night lights and down lights
- Use multi-level switching and dimming of lights

Other Sustainability Features

- New dedicated process chilled water loop to replace outdated and unreliable linear accelerator cooling systems and reduce water usage by allowing continuous system operation in the event of failure, instead relying on city water as the only “back-up” cooling mode.
- Use of regional and local materials where possible
- Low VOC interior finishes such as paints, flooring and wall coverings
- Reuse of existing wall construction