



SIMON FRASER UNIVERSITY WATER TOWER BUILDING DATA CENTRE

ABOUT THIS PROJECT

- + Home to the most powerful academic supercomputer in Canada, “Cedar.”
- + Used to study crime data and perform research for other industries.
- + Engaged to provide electrical engineering design for the facility, including power distribution, lighting, and power system design services.
- + A unique challenge of the project involved converting an existing building to a new data centre.
- + Worked closely with the contractor to effectively phase the project, maintaining operations throughout.
- + Provided a high-efficiency data centre infrastructure for SFU’s research computing servers (one 2.0MVA unit sub and two 1MVA diesel generators).
- + Design includes High Availability (HA) computing systems, protected by a 550kVA (n+1) Uninterruptible Power Supply (UPS) system, and 2.0MVA of utility power for an Ultra High Density (UHD) computing system (30kw per cabinet).
- + Provided infrastructure to assist SFU in reaching its annual benchmark efficiency for Power Usage Effectiveness (PUE) target of 1.097 (the “ideal energy usage” range for data centres).

LOCATION
Burnaby, BC

**SMITH + ANDERSEN
SERVICES PROVIDED**
Mechanical, Electrical

SIZE
22,000 sq. ft. (2,044 sq. m.)

BUDGET
\$7.7 Million

COMPLETION YEAR
2017

HOT BUTTONS

POST-SECONDARY

LARGE DATA CENTRES

ASSESSMENTS

UPGRADES

NOT NEW BUILD

