

# Structured Cabling for Communications/Security at Bath and Millhaven Institutions



## Client:

Correctional Services Canada (CSC)

## Location:

Bath, Ontario

## Start Date:

January 2012

## Completion Date:

July 2015

## Construction Value:

\$17 million

## Key Personnel:

**Bill Weekes** CET RCDD CFOT

**Kenji Tan**

## Services Provided:

- Audit
- Conceptual Design
- Design Development
- Construction Documents
- Construction Administration

**Project Type:** Design-Bid-Build

**Project Role:** IT/Comms & Electronic Security Design Consultant

**Description:** Millhaven and Bath institutions were built to accommodate 413 and 342 inmates respectively. With the rise of inmate population over the years, both institutions now require an expansion for more accommodation units.

The requirement to build additional accommodation units has brought forth the need for a temporary construction fence to secure the construction within the compound. The design requires the use of video surveillance and intrusion detection comprised of vibration sensor cables and microwave technology.

Temporary systems to support safe construction perimeter fencing comprised two different designs: traditional and advanced. The traditional design involved installing electrical power into network enclosures at different locations. Each network enclosure contained a POE switch connected to a fibre backbone leading to the Central Equipment Room for recording at one end while copper data cabling powers and receives video from area cameras. The advanced design created one network node only and deployed composite fibre (signal) and copper (power) cabling to different locations whereby it was terminated onto small form factor Media Converter/Power Injectors. From here copper data cabling would extend to the cameras to provide power and receive signal.

To facilitate the increased inmate population, a newly expanded kitchen facility was required at both institutions for which Fancom designed the voice, video, intrusion detection, data communications and radio for security systems. The new spaces requiring design included the new kitchen entrance facility, main telecom room, security video monitoring and control centre.

Additional design requirements for the kitchen redesign included the following:

- Identification of pathways for interconnection of new cables to connect with existing voice services located in other buildings
- Identification of pathways for interconnection of new cables to connect with existing CSC data services located in other buildings
- Addition upgrade of servers, licenses and other equipment required to capture and display the video information from the new cameras in the M CCP and new kitchen security offices

## Systems Designed:

### Division 27: Communications

Communications High Speed Backbone  
Communications Cabling for Data  
Communications Cabling for IP Surveillance

### Division 28: Electronic Safety and Security

Security Equipment for IP Surveillance  
Security Equipment for Intrusion Detection