

Royal Columbian Hospital

Organization: BC Clinical & Support Services (BCCSS) under Fraser Healthy Authority

Technology Focus: Distributed Antenna System (DAS)

Duration of the project: 2016 - Ongoing SLA

BC Clinical & Support Services, on behalf of Fraser Health Authority is seeking an experienced DAS integrator to design, supply, install, test, operate, and maintain a multi-technology, multi-carrier DAS for the Royal Columbian Hospital, as part of its redevelopment.

Fraser Health Authority selected Cartel for their expertise in designing, deploying, and maintaining campus-wide DAS solutions in hospital environments and in environments. Also, since Cartel has good standing relationships with the Canadian cellular service providers (TELUS, Bell, Rogers, and Freedom) and E-Comm. The DAS design and installation occurred in parallel with facility construction.



Phase One of the RCH Redevelopment Project included the design and construction of the new Mental Health (MHSU) Building, an Energy Centre, 3.5 levels of underground parking, associated tunnel and bridge connection to the existing campus. This redevelopment going forward will have an additional two phases which will take the project up to the year 2026.

ROYAL COLUMBIAN HOSPITAL

Cartel designed, deployed, and commissioned a DAS to enable multiple systems to work harmoniously together covering bands 850 MHz, 1900 MHz, 2100 MHz, and 2600 MHz. This was a complex solution due to a requirement for coverage on the mental health floors utilizing custom-designed ceiling enclosures for the antennas. The DAS will enable Cellular signals from the major Canadian Wireless Operators such as TELUS, Rogers, Bell, and Freedom are routed to the Host Unit located at interconnection point (POI).

Cartel's design includes a fiber optic module (FIU & FCM), fiber amplifiers (FBDA), and 198 antennas installed across the facility. Cartel has also supplied and installed a rooftop donor antenna system as a requirement. A low-band DAS system comprised of three subsystems: the Facilities Maintenance Organization DAS, E-Comm (first responder) DAS, and Security/Paging DAS which were part of the system designs.

Each subsystem is comprised of a roof-mounted donor antenna, power amplifiers, active and passive signal distribution infrastructure, and a shared network of wideband ceiling mount antennas installed throughout the buildings. Cartel's low-band DAS design includes fiber optic amplifiers (FBDA) and 113 service antennas.

Cartel provided agile systems design, responding to multiple changes during the construction period of RCH, working in parallel to resolve any coverage requirements for the Phase One project. Cartel ensured that Royal Columbian Hospital received a fully calibrated and operational system covering all the band signals in preparation of the redevelopment project opening. Cartel employing it's typical care, discretion, and courtesy in working alongside many trades as the construction site transitioned again to a functioning hospital.