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Children's Hospital of Eastern Ontario
Parking Garage

Design Brief for
ELV Systems

Issued for RFP

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1.0 INTRODUCTION

The purpose of this Design Brief for ELV Systems is to outline the systems concept at schematic design level, based on CHEO requirements and IO guidelines considering all the meetings/discussions with the CHEO and other design consultant team members.

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2.0 PROJECT DESCRIPTION

The project consists of a seven storey parking garage, owned and operated by CHEO, subject to expansion, located at Ring Road, Ottawa, Ontario.

3.0 IT STRUCTURED CABLING

The new multilevel Parking Garage shall be serviced by two redundant paths, one from existing CHEO hospital and one from the future 1Door4Care facility. Project Co shall provide four (4) 100mm underground ducts for each path. The network will be set up for wired and wireless services.

Two Telecommunication closets will support ICAT devices without exceeding the 90m distance. Each Telecommunication closet shall be a minimum size of 3.5m x 2.0m. One (1) full sized free standing rack for each parking garage's telecommunications closet will be provided.

The structured cabling solution includes backbone cables, tie-cables, horizontal cables, patch panels, fibre optic termination panels, patch cords, modular jacks, faceplates, and associated hardware.

The backbone cabling consists of a path from the server room in the existing building to each telecom closet in the Parking Garage, and a path from future 1Door4care NCR to each telecom closet in the Parking Garage.

The horizontal cabling consists of all physical cabling and connecting hardware that extends from the work area outlets/connectors to the patch panels at the Telecom room Racks. Horizontal cables consist of Category 6A UTP (CAT 6A) for data, telephone and other services. The

horizontal cabling is installed using a star topology with continuous lengths from origin to destination.

The provisions for wired data and telephone drops are based on the usage, function and equipment of the different areas to ensure that all necessary systems are supported by the central network.

The systems to be installed will be an extension of the existing CHEO hospital and future 1Door4Care facility's systems. The Network shall support the systems including but not limited to:

Wireless Network
Telephony
Access Control
Video Surveillance
Intercom
Duress System
Wayfinding Kiosks
Parking System

The wireless system is to provide 100% Wi-Fi coverage throughout the building. The system will be designed to handle Wi-Fi at a minimum signal strength of -65dBm. The system will be compliant with standard 802.11n,ac,ax. Wireless access points, controllers, network switches for WiFi system, patch cables and its associated equipment for a fully functional wireless system are provided at the Telecom Rooms locations and the existing building. The systems will be supported by generator power and Local UPS

4.0 SECURITY SYSTEMS

The security systems consist of Access Control, CCTV and Intercom Systems. The Access Control System is an IP based enterprise solution. The system utilizes smart contactless access cards and is capable of integration to other systems via "Web services". System monitoring is via client-based software from the designated Security Control Room as well as allows for web-based access for remote users.

The CCTV Monitoring System is an IP based, enterprise solution. System monitoring is via client-based software from the designated Security Control Console, as well as web-based access for remote users. The system has the capability of simultaneous live viewing and recording of individual cameras at different frame rates and resolutions. Provide full coverage of public areas

and all entrance/exit points to each building. Provide separate pricing for complete coverage of parking lots.

System storage is based on a 'centralized' topology, with recording in HD quality at 30 FPS and an online retention of 30 days. All cameras are IP based and support Power over Ethernet (PoE), with the exception of outdoor cameras or cameras out of wired Ethernet range, which may be powered locally from a CCTV power supplied connected to a battery backup and connected to the network with fiber optic cable or media conversion.

The Intercom System is a complete IP solution, connected to the security network for communication. The intercom system is fully integrated with the CCTV System to provide automatic camera call upon activation of a remote station. System monitoring is from the designated Security Control Console. Intercom stations are provided at the main building entrance and the loading dock.

Blue light duress stations are provided as part of the Intercom System. The duress stations are complete with a blue indicator light, two-way audio communication and powered on emergency power. Provide integrated CCTV coverage of each duress station location, for situational awareness of staff/responders during a duress call.

5.0 WAYFINDING KIOSKS

Wayfinding Kiosks will be located within elevator lobbies of each parking level to aid in routing client traffic. These Kiosks consist of a single commercial grade 50" monitor in portrait orientation rated for 24-hour 365 day operation.

Clients arriving at any time of day will be able to easily use the Wayfinding Kiosks in order to efficiently route their path to their appointment from their current location. Wayfinding will support this building wide navigation from a centralized system, employing consistent graphics and fonts across all locations and integrating with the digital signage platform core.

Design and operation of the Wayfinding Kiosks shall be in compliance with accessibility guidelines and requirements. Heights, clearances, and range of operation shall allow for unobstructed use by all clientele. Voice control will be available for user inputs along with auditory feedback for flexibility. Inductive loop technology shall be utilized for communication of instruction and operation to the hearing impaired.