Part - Partie 1 of - de 2
See Part 2 for Clauses and Conditions
Voir Partie 2 pour Clauses et Conditions

Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Bid Receiving - PWGSC / Réception des soumissions - TPSGC
11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0B2 / Noyau 0B2
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Title - Sujet
DOOR CONTROL-SPRINGHILL INSTITUTION

Solicitation No. - N° de l'invitation	Amendment No. - N° modif.
21120-166580/A	009

Client Reference No. - N° de référence du client	Date
21120-166580	2015-10-15

GETS Reference No. - N° de référence de SEAG
PW-$$HN-445-67507

File No. - N° de dossier	CCC No./N° CCC - FMS No./N° VME
hn445.21120-166580	

Solicitation Closes - L'invitation prend fin	Time Zone Fuseau horaire
at - à 02:00 PM on - le 2015-10-27	Eastern Daylight Saving Time EDT

F.O.B. - F.A.B.
Plant-Usine: ☐ Destination: ☐ Other-Autre: ☑

Address Enquiries to: - Adresser toutes questions à:	Buyer Id - Id de l'acheteur
Ladouceur, Joanne M.	hn445

Telephone No. - N° de téléphone	FAX No. - N° de FAX
(819) 420-0340 ( )	( ) -

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Electrical & Electronics Products Division
11 Laurier St./11, rue Laurier
7B3, Place du Portage, Phase III
Gatineau, Québec K1A 0S5

Telephone No. - N° de téléphone
Facsimile No. - N° de télécopieur

Name and title of person authorized to sign on behalf of Vendor/Firm
(type or print)
Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)

Signature   **Date**

Canada

Solicitation No. - N° de l'invitation	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur
21120-166580/A	009	hn445
Client Ref. No. - N° de réf. du client	File No. - N° du dossier	CCC No./N° CCC - FMS No/ N° VME
21120-166580	hn44521120-166580	

DOCUMENT ATTACHED

This amendment 008 is raised to provide a response to a supplier enquiry. The question and response are provided as follows:

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Question: Will the UPS's be required to back up door power?

Response: No.

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Question: Is there an updated site map that includes building 52 and 57? The Springhill_e-1_comductbank-e1_of_1.pdf doc above does not have these?

Response: See attached file (Springhill living unit 52 and 57 1678) showing living units 52 and 57 integration to the Springhill_e_1_ comductbank-e1 drawing.

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Question: It is our understanding that there is fibre installed from building 05 to 52 and 57.   Will this also have to be new fibre?

Response: Yes, new OM3 50 micron fibre is also required for buildings 05, 52 and 57. These fibres shall be terminated on new contractor provide fibre patch panels in the living units TERs and building 1 CER room 112. New OM3 50 micron fibres (24 strands) are required for all fibre connections.

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Question: How many touchscreen control posts are there in buildings 52/57?

Response: There are two (2) GUI touch screen for each living unit.

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Question: Please provide a door schedule and counts for units 52/57?

Response: A door schedule and counts are not available for Units 52 and 57,as per STR section 3.2.1 Scope of work; The contractor must carry out a detailed investigation, including a review and analysis of the entire existing door control system, including all components not being replaced under this contract. Unit 52 has same floor plan as 50 and 51, unit 57, the 96 bed, has the same floor plan as building 58.

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Question: Section 3.8 .2.1 specifies: 'Provides stackable 24 port network edge switches' please confirm the port count of these switches. IS this 24 or 48 ?

Response: See replacement section 3.8 Network architecture below.

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Question: Section 3.8.5.1 specifies: 'Support up to 50 Ethernet Ports (50 port version)' please confirm 24 port switches should support 50 ports

Response: See replacement section 3.8 Network architecture below.

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INSERT: **After review related to questions 3 and 4 above and to ensure clarity, the following text must be used to replace the whole of section 3.8 in the STR:**

3.8   Network Architecture

The contractor must supply new network core switches and replacing all existing DCMS system network switches.

CSC requires an upgraded network infrastructure capable of providing integrated support for multiple Electronic Security System (ESS) sub systems. Initially, for this deployment, this network infrastructure must support the deployment of a new DCMS subsystem and associated client computers. The system must be expandable to scale to support additions to this DCMS network infrastructure and/or addition of further ESS sub-systems within the institution as required in the future. This network infrastructure must provide an integrated, end-to-end "virtualized" architecture for the systems connected to it, using state of the art techniques for the network operation and configuration as described in sections below.

The new network switching infrastructure must be sourced by one switch vendor with the ability to interface in a multi-vendor manner to other vendors equipment should future requirements deem this necessary.

The contractor must take into account that CSC, ESS systems network traffic is predominantly streaming video from CCTV camera operation. The provided network infrastructure must be optimized for (H.264) multicast video. Network optimization includes the perspectives of:
- simplicity and efficiency of protocols involved;
- efficient video streaming with required low latency, high bandwidth and network resiliency for predictable, always on connectivity;
- connectivity to the associated video management system (VMS), storage and viewing stations (NVUS).

The system must be capable of supporting thousands of independent streams. The system must be configured with readiness for sub-second failover recovery in the event of any failure, with no visible loss of data, once active-active links are deployed within the institution. The faster recovery is to maintain connectivity and avoid data or packet loss and minimize pixilation of video data.

The network infrastructure must provide an open system, multi-vendor capable, communication environment utilizing IEEE 802,1aq Shortest Path Bridging (SPB) to forward and control traffic between switches.

The contractor is responsible to ensure the new switching infrastructure is fully integrated into the FAAS and PIU alarm and display systems.

The network infrastructure must consist of a Core network infrastructure and edge switches to be built primarily from 48-port switch devices.

The contractor is responsible for taking all steps to minimize the number of network equipment devices required to minimize sparing requirements.

All switches must include QoS (Quality of Service) and security management capabilities. Each switch must have the ability to classify, mark and prioritize traffic into priority queues, and/or weighted round robin queues on every port, and maintain QoS across the virtual / stack backplane. Classification controls and ACL (Access Control List) strategies must include the ability to sort traffic based on: MAC Address, 802.1Q VLAN ID, IP Address, TCP/UDP Ports, CoS (Class of Service), ToS (Type of Service), and DSCP (Differentiated Services Code Point).

The network infrastructure must provide a layer 2 SPB VID (VLAN identification) environment in which each ESS subsystem has its own allocated VID to provide for secure traffic segregation for each sub system and thus ease of monitoring, troubleshooting and maintenance. Each VID must be logically separate from any other and thus allow multiple services and systems to operate independently on the same wired infrastructure.

The network infrastructure must be capable of supporting flexible topology configurations e.g. star, full or partial mesh or ring topology to allow for optimal use of additional data paths as these become available and thus provide extra resiliency and readiness for redundancy in network connectivity connections.

The electrical contractor is responsible to confirm that all network switches within the network infrastructure are mountable in 19" mounting rail racks, and that the switches do not exceed the depth of communication racks and cabinets.

The contractor is to supply network switches to meet the needs of all ESS network requirements.

For network access control and security, the network system must provide software for automatic edge device authentication to ensure edge devices are compatible devices for installation, manage device permissions and monitor the health of connected devices.

All network switches must be capable of network access control (NAC) via device authentication and IEEE 802.1x Port-based NAC, and include a management GUI interface for maintenance equipment.

Where deployment of the NAC authentication mechanism requires the installation of a new server (that is an available one does not exist on site) for its functionality this must be provided by the contractor.

Each switch must support end-to-end (system-wide) network infrastructure support for a flexible and robust, optimally high availability and reliable (Best in class mean time between failure) network (that is always on), with high throughput (1Gbps) and providing a lossless environment with lowest latency (<4ms) for an evolving, high performance CSC ESS network infrastructure and Data Centre.

The network architecture is required to support zero down time for maintenance to core switches allowing for the continuous operation of the DCMS subsystem and other connected ESS subsystems and services.

Switch Technical requirements, all switches must support
- 350 W, 120 V power supply; POE switches are required to be able to concurrently deliver up to POE+ per port
- up to 50 Ethernet ports (48 port version)
- for IPv4 and IPv6 software

Temperature range of operation: O^oC to 40^oC
Operating humidity range: 0 to 95% relative humidity

Core network

The core network must consist of a switch cluster, with a minimum of two switches acting as one logical switch, providing active-active switch operation and linkage capability.

This switch cluster will provide high availability connectivity and performance utilizing active-active links to the edge switching equipment. Thus, if one unit becomes inoperable (maintenance update, equipment failure) bandwidth is dropped by a factor of 50%, but the 2nd unit maintains 100% of the connectivity requirement and maintains uninterrupted operation of the overall network.

Core Switches must include clustering capabilities, whereby the physical core switches can be logically combined to appear as a single L2 switch, from the perspective of any edge switch, and from any multi-NIC equipped server or appliance. These 'virtual' links between the edge and the core cluster must be Active-Active (i.e. spanning tree, and other loop avoidance or hot-standby methods disabled), load sharing, and capable of scaling up to 8 physical interfaces bound into a single virtual trunk. It is imperative that service outages normally associated with network disruption, such as the restart, module alteration, power outage, or software/firmware reload of a single core switch does not disrupt the flow of traffic through the entire virtual / clustered core.

This switch cluster must be a 19" rack mountable 1RU switch providing the capability to be configured with Layer 2 and layer 3 switching features.

The core switch and network infrastructure must support ease of provisioning via edge only device and service provisioning, providing ease of configuration at the edge devices automatically informing the network infrastructure of a move, add or change and not require core configuration when changes to the network are required. The edge only provisioning must be capable of adding a new device to the associated VID.

Edge network

The edge switches must be 48 port network switches utilizing 802.1aq SPB allowing for ease of future expansion of the network infrastructure and the capability for multiple connections into different switches utilizing load balanced network paths to provide an extra level of resiliency within the network in case of any switch failure. For more remote site locations with low port capacity connection requirements a SPB-compatible lower (for example 8) capacity port switch must be used.

The edge switches must provide:
- minimum of L2+ switching
- 10/100/1000 Mbps switching
- 1GBps SFP+ uplinks (with migration option for 10Gb future uplinks) resilient, always on connectivity
- Wire-speed performance and non-blocking throughput to support a variety of applications including requirements for low latency, high bandwidth, reliable video surveillance
- Field replaceable redundant power supplies for increased resilience
- maximum POE wattage to support CCTV surveillance cameras deployed with capacity for further additions; must be able to concurrently deliver up to POE+ per port
- Flexibly support for IEE 802.3af POE and IEEE 802.3at POE+ devices per port, optimized for video surveillance (including PTZ devices, HD)
- Provide one-touch edge provisioning for edge devices with any move, add or change communicated automatically throughout the network infrastructure
- capability to add further network capacity as required without impacting current operational switching
- Support IEEE 802.1aq SPB
- Advanced QOS and prioritization
- Network access control (NAC) via device authentication software and IEEE 802.1x Port-based NAC
- Support for both IPv4 and IPv6 management addresses

The Edge switches must provide for edge-provisioning, automatically informing the rest of the network of the change/ addition, eliminating the need for manual configuration of the core switches when changes are made.

Network Cabling

For this new DCMS subsystem switching infrastructure new OM3 50 micron fibre cable must be provided. . New 24 strand fibre cables shall be installed to each location where fibre is required.

Full deployment and benefits of the core active-active links must use 2 multi-mode fibre strand pairs, one connected to each of the core switches to provide active-active links from each of the connected edge nodes to the core switches.

This reduces single points of failure and dependencies of the network on an individual link.

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All other terms and conditions remain unchanged.