



**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving
PWGSC
33 City Centre Drive
Suite 480C
Mississauga
Ontario
L5B 2N5
Bid Fax: (905) 615-2095**

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

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

Issuing Office - Bureau de distribution

Public Works and Government Services Canada
Ontario Region
33 City Centre Drive
Suite 480
Mississauga
Ontario
L5B 2N5

Title - Sujet Audio Video for GTA Consolidation	
Solicitation No. - N° de l'invitation EQ754-181239/A	Date 2018-01-15
Client Reference No. - N° de référence du client EQ754-181239	
GETS Reference No. - N° de référence de SEAG PW-\$TOR-215-7464	
File No. - N° de dossier TOR-7-40131 (215)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2018-02-05	Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Lopez, Maria	Buyer Id - Id de l'acheteur tor215
Telephone No. - N° de téléphone (905) 615-2071 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF PUBLIC WORKS AND GOVERNMENT SERVICES CANADA 11th FL, 4900 YONGE ST TORONTO Ontario M2N6A6 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
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

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THIS DOCUMENT CONTAINS A SECURITY REQUIREMENT

PART 1 - GENERAL INFORMATION

1.1 Security Requirements

1. At the date of bid closing, the following conditions must be met:
 - (a) the Bidder must hold a valid organization security clearance as indicated in Part 6 - Resulting Contract Clauses;
 - (b) the Bidder's proposed individuals requiring access to classified or protected information, assets or sensitive work sites must meet the security requirements as indicated in Part 6 - Resulting Contract Clauses;
 - (c) the Bidder must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites;
2. For additional information on security requirements, Bidders should refer to the [Contract Security Program of Public Works and Government Services Canada](http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html>) website.

1.2 Statement of Work/Requirement

The contractor must provide the goods and services in accordance with the technical requirements stated herein Annex A, Statement of Work.

1.2.1 Delivery Requirement

The delivery requirement is mandatory and must be completed in accordance with the scheduled phases. The Contractor must coordinate all deliveries with the Constructor and the building operator - MLPM.

Phase One - includes all rooms on the 11th floor and main Audio-Visual Equipment room located on the 10th floor. Mobilization date was October 13, 2017. Anticipated substantial completion date is April 30, 2018

Phase Two – includes all rooms on 10th floor. Anticipated mobilization dates is May 5, 2018. Anticipated substantial completion date is November 5, 2018.

Phase Three - includes all rooms on 12th floor. Anticipated mobilization date is November 5, 2018. Anticipated substantial completion date is March 26, 2019.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.4 Trade Agreements

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The requirement is subject to the provisions of the Canadian Free Trade Agreement (CFTA).

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The [2003](#) (2017-04-27) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days

Insert: 90 days

2.1.1 SACC Manual Clauses

SACC Reference	Section	Date
A9033T	Financial Capability	2012-07-16
B1000T	Condition of Material	2014-06-26

2.2 Submission of Bids

Bids must be submitted ONLY TO THE BID RECEIVING UNIT by the date, time and place indicated on page 1 of the bid solicitation. Do not send proposal directly to the Contracting Officer. Email proposals are not accepted.

PWGSC Bids Receiving Unit
33 City Centre Dr, Suite 480C
Mississauga Ontario
L5B 2N5
Fax: 905-615-2095

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

2.5 Mandatory Site Visit

It is mandatory that the Bidder or a representative of the Bidder visit the work site. Arrangements have been made for the following:

Mandatory site visit will be held at 4900 Yonge Street, 12th floor reception on January 24, 2018 at 1:00 pm.

Note that in order to be granted access to the site, both hard hats and steel toe or closed toe shoes are mandatory.

Bidders will be required to sign an attendance form at the required site visit. Bidders should confirm in their bids that they have attended the site visit. Bidders who do not attend or send a representative to the site visit will not be given an alternative appointment and their bids will be rejected as non-compliant.

The onus is on the bidders to arrive at the site visit in a timely manner. Bidders arriving late may not be permitted to attend the site visit. The Bidder must have at least one attendee at the site visit.

To apply for the site visit, contact the Contracting Authority: maria.lopez@pwgsc-tpsgc.gc.ca
The request must be submitted no later than January 23, 2018 by 4:00 pm

Bidders are requested to clearly identify the name of the participant(s), the name of the company they represent, telephone number, facsimile number and e-mail address.

Bidders are advised that any clarifications or changes resulting from the site visit shall be included as an amendment to the bid solicitation document.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

Canada requests that Bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (3 hard copies and 2 soft copies on USB Memory Stick, CD or DVD) Section

II: Financial Bid (1 hard copy)

Section III: Certifications (1 hard copy)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid. Canada

requests that Bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, Bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Bid

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

Bid prices must include all costs associated with all requirements of the solicitation to provide fully functional rooms. These costs must be included in the price of each room.

3.1.2.1 Exchange Rate Fluctuation

The requirement does not offer exchange rate fluctuation risk mitigation. Requests for exchange rate fluctuation risk mitigation will not be considered. All bids including such provision will render the bid non-responsive.

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

You are reminded that this solicitation requires the compliance and/or completion of requirements attached as an Annex and forming part of this document.

4.1 Evaluation Procedures

- a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

All bids must be completed in full and provide all of the information requested in the bid solicitation to enable full and complete evaluation.

In the case where a bidder proposes to supply an alternate or equivalent item, the onus is on the bidder to prove that the alternative/equivalent item is actually an equivalent or better than the brand name.

4.1.1.1 Mandatory Technical Criteria

The following Mandatory requirements must be submitted with the bid for evaluation

- x Technical compliance herein;
- x Appendix D are mandatory requirements and will be used as the Mandatory evaluation criteria

4.1.1.2 Mandatory Criteria

- x Requirements specified in the solicitation documents using the word "must" are mandatory.

4.1.2 Financial Evaluation

Bids will be evaluated by the total price of the bid. The total price of the bid will be determined by the sum of each room as detailed in Annex B Basis of Payment.

4.1.2.1 Pricing Basis

The bidder must quote firm unit prices in Canadian dollars DDP Delivered Duty Paid (PSPC, 4900 Yonge Street, Toronto, Ontario), Applicable Taxes extra, as applicable. Freight charges to destination and all applicable Custom duties and Excise taxes must be included.

4.2 Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the "lowest evaluated price on an aggregate basis" will be recommended for award of a contract.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract. The

certifications provided by Bidders to Canada are subject to verification by Canada at all times.

Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the declaration form available on the Forms for the Integrity Regime website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 General Environmental Criteria Certification

The Bidder must select and complete one of the following two certification statements.

- A) The Bidder certifies that the Bidder is registered or meets ISO 14001.

Bidders' Authorized Representative Signature

Date

or

- B) The Bidder certifies that the Bidder meets and will continue to meet throughout the duration of the contract, a minimum of four (4) out of six (6) criteria identified in the table below.

The Bidder must indicate which four (4) criteria, as a minimum, are met.

Green Practices within the Bidders' organization	Insert a checkmark for each criterion that is met
Promotes a paperless environment through directives, procedures and/or programs	
All documents are printed double sided and in black and white for day to day business activity unless otherwise specified by your client	
Paper used for day to day business activity has a minimum of 30% recycled content and has a sustainable forestry management certification	
Utilizes environmentally preferable inks and purchase remanufactured ink cartridges or ink cartridges that can be returned to the manufacturer for reuse and recycling for day to day business activity.	
Recycling bins for paper, newsprint, plastic and aluminum containers available and emptied regularly in accordance with local recycling program.	
A minimum of 50% of office equipment has an energy efficient certification.	

Bidders' Authorized Representative Signature

Date

5.2.3 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "[FCP Limited Eligibility to Bid](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969)" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969) website
(http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969)" list at the time of contract award.

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PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

6.1 Security Requirements

6.1.1 The following security requirements (SRCL and related clauses provided by the Contract Security Program) apply and form part of the Contract.

1. The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid Designated Organization Screening (DOS), issued by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).
2. The Contractor/Offeror personnel requiring access to sensitive work site(s) must EACH hold a valid RELIABILITY STATUS, granted or approved by CISD/PWGSC. Until the security screening of the Contractor personnel required by this Contract has been completed satisfactorily by CISD, PWGSC, the Contractor personnel **MAY NOT ENTER** sites without an escort.
3. Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of CISD/PWGSC.
4. The Contractor/Offeror must comply with the provisions of the:
 - a. Security Requirements Check List and security guide (if applicable), attached at Annex C;
 - b. Industrial Security Manual (Latest Edition).

6.2 Statement of Work/Requirement

The contractor must provide the goods and services in accordance with the technical requirements stated herein in Annex A, Statement of Work.

6.2.1 SACC Manual Clauses

SACC Reference	Section	Date
B1501C	Electrical Equipment	2006-06-16
B7500C	Excess Goods	2006-06-16

6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

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6.3.1 General Conditions

2010A (2016-04-04), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

And

2010C (2016-04-04), General Conditions - Services (Medium Complexity) sections 2010C 16 and 2010C 17 apply to and form part of the Contract.

6.4 Term of Contract

6.4.1 Delivery Date

All the deliverables must be received on or before _____ (Delivery will be inserted at contract award).

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:
Maria Lopez, Supply Team Leader
Public Works and Government Services Canada - Acquisitions Branch
33 City Centre Dr, Suite 480C
Mississauga, ON L5B 2N5
Telephone: (905) 615-2071
E-mail address: maria.lopez@pwgsc-tps.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.5.2 Project Authority

The Project Authority for the Contract is: (will be inserted at contract) Name:
Title:
Telephone: (xxx) xxx-xxxx Facsimile: (xxx) xxx-xxxx
E-mail:

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

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6.5.3 Technical Authority

The Technical Authority for the Contract is: (will be inserted at contract) Name:

Title:

Telephone: (xxx) xxx-xxxx Facsimile: (xxx) xxx-xxxx

E-mail:

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority; however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.5.4 Contractor's Representative

Name and telephone number of the person responsible for: (will be inserted at contract)

General enquiries

Name:

Telephone:

Facsimile:

E-mail:

Delivery follow-up

Name:

Telephone:

E-mail:

Facsimile

6.6 Payment

6.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices as specified in the contract (Annex B) for a cost of \$ ____ (insert the amount at contract award). Customs duties are included and Applicable Taxes are extra.

6.6.2 Limitation of Price

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.6.3 Progress Payments

1. Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the Work, up to 90 percent of the amount claimed and approved by Canada if:
 - a. an accurate and complete claim for payment using form [PWGSC-TPSGC 1111](#), Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
 - b. the amount claimed is in accordance with the basis of payment;
 - c. the total amount for all progress payments paid by Canada does not exceed 90 percent of the total amount to be paid under the Contract;
 - d. all certificates appearing on form [PWGSC-TPSGC 1111](#) have been signed by the respective authorized representatives.
2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted.
3. Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

6.6.4 SACC Manual Clauses

SACC Reference	Section	Date
G1005C	Insurance	2016-01-28

6.6.5 Electronic Payment of Invoices – Contract *(Will be modified at contract award)*

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;

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-
- c. Direct Deposit (Domestic and International);
 - d. Electronic Data Interchange (EDI);
 - e. Wire Transfer (International Only);
 - f. Large Value Transfer System (LVTS) (Over \$25M)

6.7 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - (a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
 - (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

Public Works and Government Services Canada - Acquisitions Branch
33 City Centre Dr, Suite 480C
Mississauga, ON L5B 2N5
Attn: Maria Lopez

6.8 Certifications

6.8.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing additional information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the additional information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

6.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____. *(Insert the name of the province or territory as specified by the Bidder in its bid, if applicable)*

6.10 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the general conditions 2010A (2016-04-04), General Conditions - Goods (Medium Complexity), and 2010C (2016-04-04), General Conditions - Services (Medium Complexity) sections 2010C 16 and 2010C 17;
- (c) Statement of Work;

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tor215
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(d) the Contractor's bid dated _____, as clarified on _____ " **or** ", as amended on _____

6.11 SACC Manual Clauses (Delivery)

SACC Reference	Section	Date
<u>D9002C</u>	Incomplete Assemblies	2007-11-30

6.11.1 Shipping Instructions - Delivery at Destination

Goods must be consigned to the destination specified in the Contract and delivered:

(a) Delivered Duty Paid (DDP) PSPC, 4900 Yonge St, Toronto, ON M2N 6A6, Inco terms 2000 for shipments from a commercial contractor.

6.11.2 Shipping - Scheduling

The Contractor must deliver the goods to PSPC, 4900 Yonge St, Toronto, Ontario. All deliveries, installation and project requirements must be coordinated with (To be complete at Contract award)

ANNEX A
STATEMENT OF WORK

1. OVERVIEW:

1.1 This specification describes the Audio-Visual Systems required to be supplied and installed for the Public Services and Procurement Canada (PSPC) Space Optimization Project at 4900 Yonge Street in Toronto.

1.1.1 The project will be completed in three phases:

Phase One - includes all rooms on the 11th floor and main Audio-Visual Equipment room located on the 10th floor. Mobilization date was October 13, 2017. Anticipated substantial completion date is April 30, 2018

Phase Two – includes all rooms on 10th floor. Anticipated mobilization dates is May 5, 2018. Anticipated substantial completion date is November 5, 2018.

Phase Three - includes all rooms on 12th floor. Anticipated mobilization date is November 5, 2018. Anticipated substantial completion date is March 26, 2019.

1.2 The Contractor performing the requirements of this specification will be referred to as the Audio-Visual Contractor.

1.3 The Audio-Visual systems must employ proven technology that is reliable and user friendly to enhance the user requirements for Audio Visual Presentations, Teleconferencing and Video Conferencing.

1.4 This document must be read in conjunction with the Audio-Visual systems drawings, (drawings AV00 to AV24 attached as Annex C), and all other documentation provided by the design consultant and sub consulting teams for this project.

1.5 The Audio-Visual systems must consist of:

- 1.5.1 Audio Systems.
- 1.5.2 Video Presentation Systems.
- 1.5.3 Teleconferencing Systems
- 1.5.4 Video Conferencing Systems
- 1.5.5 Audio-Visual Control Systems

2. QUALITY ASSURANCE:

2.1 The Audio-Visual Contractor must be qualified and experienced in the supply and installation and integration of high quality audio visual presentation systems.

2.2 The Audio-Visual Contractor must have a minimum experience of ten years' of audio visual system

integration.

- 2.3 The Audio-Visual Contractor must have installed a minimum of 3 Audio Visual system projects of similar design and scope.
- 2.4 The Audio-Visual Contractor must be certified to design, engineer and implement digital media platforms, mix minus matrix voice lift systems and touch panel control systems.
- 2.5 The Audio-Visual Contractor must be fully conversant and have a working knowledge of digital media connection platforms such as:
- 2.5.1 Display port,
 - 2.5.2 High Definition Multimedia Interface known as HDMI
 - 2.5.3 Digital Visual Interface known as DVI
 - 2.5.4 High-Bandwidth Digital Content Protection known as HDCP
 - 2.5.5 Extended Display Identification Data known as EDID
- 2.6. The Audio-Visual Contractor must be equipped with professional industry standard calibrated test equipment as required to perform the end to end testing and performance measurements as set out in this specification.
- 2.7. The Audio-Visual Contractor must as a requirement retain in their technical library all current updated versions of the referenced documents set out in this document.
- 2.8. The Audio-Visual Contractor must employ staff on the project who are in possession of WHMIS and Fall Arrest certification.
- 2.9. The Audio-Visual Contractor must submit for compliance approval working shop drawings indicating all equipment products and proposed connection system wiring drawings for approval by PSPC and their consultant prior to the installation of any Audio-Visual equipment.
- 2.10. The Audio-Visual Contractor must submit samples of Audio-Visual components required to be integrated into furniture, walls floors and ceilings for approval by PSPC and their consultant at no extra cost to the project.

3 RESPONSIBILITIES:

- 3.1 The Audio-Visual Contractor must coordinate with the General Contractor on the project and the other trades as required as outlined in this specification.
- 3.1 The Audio-Visual Contractor must ensure that all the equipment required to execute the Audio-Visual systems as described and identified in this specification are delivered to the site at the required final locations.
- 3.2 The Audio-Visual Contractor must ensure all low voltage audio, video and control cable, relating to the Audio-Visual system is suitable for the Audio-Visual system during the installation of the cable by the

Electrical Contractor.

- 3.3 The Audio-Visual Contractor must ensure all connection panels fit all back boxes provided by the Electrical Contractor.
- 3.4 The Audio-Visual Contractor must be responsible to supply for installation by the Electrical Contractor supports or fasteners for loudspeakers, IR radiator, and all other equipment relating to the Audio-Visual systems that is attached to the building and is the responsibility of the General Contractor to install.
- 3.5 The Audio-Visual Contractor must be responsible for ensuring that the installed back boxes, floor boxes and cable systems meet the operational and performance specifications.
- 3.6 The Audio-Visual Contractor must be responsible for ensuring and must certify that all electronic equipment supplied as part of the Audio-Visual system, which operates above 24V AC or DC is CSA or UL approved prior to delivery to site.
- 3.7 In the event an equipment piece which connects to AC power is not CSA or UL listed it must be ESAFE tested and labelled accordingly.
- 3.8 The Audio-Visual Contractor must be responsible for ensuring that all the Audio-Visual systems referred to in this specification, be installed and ensure the final quantities of equipment are suitable and correct regardless of any quantities that may be indicated in any Audio-Visual system drawings or specifications.
- 3.9 The Audio-Visual Contractor must provide working shop drawings showing all products to be used in the system and how the various pieces of equipment are interconnected prior to the installation of any equipment
- 3.10 The Audio-Visual Contractor must co-ordinate with the Electrical Contractor and other trades as maybe required, to ensure that the Audio-Visual related items requirements are correctly installed, these items must include but not limited to:
- 3.10.1 All back boxes, relating to Audio Visual systems
- 3.10.2 All cable systems, relating to Audio Visual systems
- 3.10.3 All power, circuits and outlets, relating to Audio Visual systems
- 3.10.4 All millwork access holes, cable pathways, cut outs and removable panels are provided by the Millwork Contractor are suitable to accommodate all the Audio- Visual requirements.
- 3.10.5 All ceiling, walls and floor cut outs are suitable to accommodate all the Audio- Visual requirements.
- 3.11 The Audio-Visual Contractor must be available for the coordination and acceptance of all the audio cable conduits, cable trays and pathway systems provided by the Electrical Contractor.

- 3.12 ~~The Audio-Visual Contractor must ensure that when installing cables carrying loudspeaker and microphone signals, they must not be run in the same cable bundles, pathways or conduits. Nor must microphone cable run in the same cable bundles, pathways or conduits as the other system cables.~~
- 3.13 The Audio-Visual Contractor must determine where cables are to terminate and where cables are to run in the floor and ceiling areas and must communicate this information to the General and Electrical Contractors for co-ordination with other trades as may be required.
- 3.14 The Audio-Visual Contractor must be responsible to supply all the equipment as specified in this document and meet the end to end performance specifications as set out in this document.
- 3.15 The Audio-Visual Contractor must report and coordinate any issues regarding the Electrical Contractor's scope to the General Contractor in a timely manner.
- 3.16 The Audio-Visual Contractor must back stop all equipment and programming warranties of the equipment regardless of whether, such equipment must cease to be manufactured or imported into Canada for a period of twenty-four months from substantial completion of the project. This is a minimum requirement of warranty. Refer to warranty section this specification.
- 3.19 The Audio-Visual Contractor must install and terminate all Audio-Visual connection panels, racks, outlets, back box cover plates which provide an audio-visual device connection point to, amplifiers, mixers, speakers, baffles, equalizers, display flat screens, projection screens, pads, wiring, equipment rack power strips etc., relating solely to the Audio-Visual systems.
- 3.20 Junction box cover plates used on junction boxes that facilitate the joining of conduits or acting as pull boxes that are not to be fitted with audio connection jacks, plates are the responsibility of the Electrical Contractor.
- 3.21 The Audio-Visual Contractor must terminate all Audio-Visual cables at floor boxes, table and wall and ceiling locations.
- 3.22 The Audio-Visual Contractor must terminate all Audio-Visual cables at the main Audio-Visual equipment room.
- 3.23 The Audio-Visual Contractor must provide a full commissioning testing document as set out in the testing and reporting section of this specification a minimum of two weeks prior to a final site review of the installed Audio-Visual systems by PSPC.
- 3.24 For each of the phases, the Audio-Visual Contractor must provide one complete set of equipment manuals for review a minimum of two weeks prior to a site review of the installed Audio-Visual systems. This must be completed for each phase as per project schedule.
- 3.25 For each of the phases, the Audio-Visual Contractor must provide one complete set of all equipment programming files in two weeks prior to the final site review of the installed Audio-Visual systems.
- 3.26 The Audio-Visual Contractor must provide instruction, testing, reporting, documentation and warranty as set out in this specification and other related contract documents.

- 3.27 The Audio-Visual Contractor must record all test results as set out in this specification and submit with all other required documents as part of the final as built package.
- 3.28 The Audio-Visual Contractor must ensure that all test equipment used in the testing and commissioning of the Audio-Visual systems is on site and available during the final site review by PSPC.

4 Scope of Work

- 4.1 PSPC requires various spaces to be equipped with Audio-Visual systems as listed in the chart below and the in drawings (drawings AV00 to AV24 attached as Annex A-Appendix 1).
- 4.2 Selected areas to be equipped with Audio-Visual capabilities must be cabled back to the Main Audio-Visual equipment room as set out in the drawings.
- 4.3 Rooms equipped with Audio-Visual control systems must have as a table top integrated power, data and audio visual recessed flip up touch panel connection box as set out in the drawings.
- 4.4 Room lighting control systems must not be integrated with the Audio-Visual control systems.
- 4.5 Room 10S61 large meeting room must reuse existing equipment currently located in the Willowdale room on the 10th floor at 4900 Yonge Street. The equipment to be reused are four display monitors and six cameras.
- 4.6 Room 10S61 must be equipped with multiple cameras and flat screens as described in the drawings
- 4.7 The Audio-Visual display connectivity must employ HD-Base T connectivity signal format.
- 4.8 The Audio-Visual network used to deploy HD Base T connectivity, required control signals and any
- 4.9 Audio-Visual WIFI network must be separate from the existing Government of Canada connectivity must not under any circumstances touch or be connected to the government network. The Audio-Visual network must be a separate network.
- 4.10 The Atrium camera must be installed to ensure it is mounted to the dry wall.
- 4.11 Meeting spaces equipped with video conferencing must be equipped with a USB camera connection at the table top for use with a laptop for collaboration sessions.
- 4.12 The table top Audio-Visual connectivity to the presentation system must be by a table recessed power, data and Audio-Visual integrated table connection box.
- 4.13 The video display in the Atrium must be a three by three video wall technology with a minimum of one hundred and sixty-five inches viewing on the diagonal. Additional details on the video are set out in the drawings (drawing AV08 in attached).

ROOM	ROOM TYPE	SYSTEM TYPE	COMMENTS
10N07	CLOSED COLLAB.	Basic AV Presentation and Teleconference	Display screen mounted on wall, basic wall mounted AV controller, table connectivity and teleconference table top system.
10N13	CLOSED COLLAB.	Basic AV Presentation and Teleconference	Display screen mounted on wall, basic wall mounted AV controller, table connectivity and teleconference table top system.
10N16	MED. MEETING ROOM	Video Conference and Teleconference. AV system connected to main AV equipment room. Touch panel control	Display screen mounted on wall. Table connectivity. Video Conference and Teleconference. AV system connected to main AV equipment room. Touch panel control
10N17	MAIN AV ROOM	Main AV Room. With Rack system as set out in the drawings	Please refer to drawings for details
10N20	SM. MEETING ROOM	AV presentation, Video Conference and Teleconference	Display screen mounted on wall Video Conference and Teleconference. AV system connected to main AV equipment room. Touch panel control
10N24	SM MEETING ROOM	Basic AV Presentation. Basic Teleconference	Display screen mounted on wall, basic wall mounted AV controller, table connectivity and teleconference table top system.
10N25	BTV / CONFERENCE	Basic Presentation	Display screens mounted on wall. Wall mounted connectivity. Touch panel control. Connected to main AV room.
10N30	CLOSED COLLAB.	Basic Presentation and Teleconference	Display screen mounted on wall, basic wall mounted AV controller, table connectivity and teleconference table top system.
10S54\10S55	MED. MEETING ROOM	AV Presentation, Video Conferencing and Teleconferencing	Display screen mounted on wall. Video and Teleconference system connected to main AV equipment room. Touch panel control.

10S57	COMPUTER TRAINING	AV Presentation and Teleconference	Front large screen front projection with ceiling mounted projector. Ceiling microphones and loudspeakers. Connected to main AV room. Wall mounted touch panel control.
10S61	LARGE. MEETING ROOM	AV Presentation, video conferencing, teleconferencing	Video Conferencing. Wall mounted Multiscreen displays and multi cameras. Table connectivity. Teleconference. Voice lift. Touch Panel control. Connected to main AV room. Equipment to be relocated from Willowdale room exiting system.
10S63	SM. MEETING ROOM	AV Presentation, Video Conferencing and Teleconferencing	Display screen wall mounted. Table connectivity. Video and Teleconference system connected to main AV equipment room. Touch panel control.
10S64	SM. MEETING ROOM	AV presentation, Video Conferencing and Teleconferencing	Display screen wall mounted Video Conference and Teleconference. Table connectivity AV system connected to main AV equipment room. Touch panel control
10S70	CLOSED COLLAB.	Basic Presentation and Teleconference	Display screen mounted on wall, basic wall mounted AV controller, table connectivity and teleconference table top system.
10S71	CLOSED COLLAB.	Basic Presentation and Teleconference	Display screen mounted on wall, basic wall mounted AV controller, table connectivity and teleconference table top system.

10S76	CLOSED COLLAB.	Basic Presentation and Teleconference	Display screen mounted on wall, basic wall mounted AV controller, table connectivity and teleconference table top system.
11N03	SM. MEETING ROOM	Basic AV presentation	Display screen mounted on wall. Table top teleconferencing. Table connectivity. Basic presentation controller.
11N06	MED. MEETING ROOM	Presentation, Video Conferencing and Teleconferencing	Display screen mounted on wall, Table integrated touch panel control. Table integrated mic. Table connectivity. Connected to main AV room.
11N13/14	LARGE. MEETING ROOM	AV presentation, Video Conferencing, Teleconferencing	Display screen mounted on wall, Table integrated microphones. AV system connected to main AV room. Touch panel control
11N18	CLOSED COLLAB.	Basic Presentation and Teleconference	Display screen mounted on wall, basic wall mounted AV controller, table connectivity and teleconference table top system
11N20	CLOSED COLLAB.	Basic Presentation and Teleconference	Display screen mounted on wall, basic wall mounted AV controller, table connectivity and teleconference table top system
11S41	SM. MEETING ROOM	Basic AV presentation and teleconference	Display screen mounted on wall. Teleconference table top. Basic AV controller.
11S42	SM. MEETING ROOM	Basic AV Presentation and Teleconference	Display screen mounted on wall. Teleconference table top. Basic AV controller.
11S46	MED. MEETING ROOM	AV Presentation, Video Conferencing and Teleconferencing	Video Conference and Teleconference. AV system connected to main AV equipment room. Touch panel control
11S56	SM. MEETING ROOM	Basic Presentation and Teleconference	Display screen mounted on wall. Table connectivity Teleconference table top. Basic AV controller.

12S44	MED. MEETING ROOM	AV Presentation and Teleconferencing	Display screen mounted on wall. Table connectivity Teleconferencing. AV system connected to main AV equipment room. Touch panel control
12S45	MED. MEETING ROOM	AV Presentation, Video Conferencing and Teleconferencing	Display screen mounted on wall Video Conference and Teleconference. AV system connected to main AV equipment room. Touch panel control
12S53	SM. MEETING ROOM	AV Presentation, Teleconference	Display screen mounted on wall. Teleconference. Touch panel AV controller. Connected to main AV equipment room
12S54	SM. MEETING ROOM	AV Presentation, Teleconference	Display screen mounted on wall. Teleconference. Touch panel AV controller. Connected to main AV equipment room
12S62	CLOSED COLLAB.	Basic Presentation and Teleconference	Display screen mounted on wall, basic wall mounted AV controller, table connectivity and teleconference table top system
10S50	ATRIUM	AV Presentation. Video conferencing, Video conferencing	Video wall, teleconferencing, video conferencing. AV system connected to main AV room. Wireless Touch panel control

5 Technical Audio-Visual System Description:

5.1 Audio System

- 5.1.1 Large meeting room 10S61 and the Atrium area must be equipped with voice lift systems.
- 5.1.2 The equipment such as matrix mixers and amplifiers must be mounted in Audio Visual rack system located in the main Audio-Visual equipment room.
- 5.1.3 The voice lift system must provide excellent clear speech intelligibility with sufficient volume levels to simulate the impression that any individual speaking in the room at a microphone is no further than one meter away from a person listening at any location within the room.
- 5.1.4 The voice lift system must employ mix minus technology that provides for individual zoning of each loudspeaker driven from an independent audio amplifier channel.
- 5.1.5 Meeting rooms 10S61 must be equipped with flush mounted ceiling full range loudspeakers as indicated on the audio-visual drawings.
- 5.1.6 Atrium area must be equipped with a combination of wall mounted line array loudspeakers and ceiling recessed flush mounted loudspeakers.
- 5.1.7 Meeting spaces equipped with voice lift must be capable of their microphone signals of being mapped independently to each loudspeaker in any combination such that any loudspeaker is minus the closest microphone that could provide a feedback pathway. This is a minimum requirement to meet the end-to-end performance of a mix minus voice lift system.
- 5.1.8 The voice lift system must be programmed and balanced to provide even voice lift levels throughout the space without the presence of disturbing positive feedback and re-circulated audio.
- 5.1.9 The voice lift system must support:
 - 5.1.9.1 Presentation Audio
 - 5.1.9.2 Teleconferencing
 - 5.1.9.3 Video Conferencing

5.2 Video Presentation System:

- 5.2.1 Each space with Audio Visual capabilities must be equipped with a video presentation system
- 5.2.2 The flat display screens must be provided and installed as indicated in the Audio- Visual drawings.
- 5.2.3 All flat screens must be commercial grade.
- 5.2.4 All flat screens must be 16 x9 aspect ratio.

- 5.2.5 All video display input signals must be scaled to a common 1080P output format prior to connection to the screen.
- 5.2.6 The display screen scaling process must ensure that an originating 4 x 3 aspect legacy ratio displayed image is not stretched horizontally to fill the 16 x 9 screen.
- 5.2.7 The display screens must be provided so that the image height is no less than six times the maximum viewing distance for participants within the room.
- 5.2.8 The minimum screen sizes are indicated in the audio-visual drawings for guidance.

5.3 Audio-Visual Control System:

- 5.3.1 Selected meeting room must be equipped with an audiovisual programmable colour touch panel control system. The touch panel will be wall mounted or integrated into the table top audio-visual connectivity panel as indicated in the audio-visual drawings.
- 5.3.2 Selected room must be equipped with a basic button wall mounted audio-visual control panel that is connected directly to the audio-visual equipment it is to control.
- 5.3.3 The programmable controller for rooms equipped with touch panels must be installed in the main audio-visual equipment room rack system.
- 5.3.4 The control system must be controlled from user input at the meeting room colour touch panel via a colour graphical user interface.
- 5.3.5 The Audio-Visual control system functionality programming software must be designed and structured to provide a stable operating control system.
- 5.3.6 The control system programming software must be created as one single master control system program with the ability to select which room is being controlled by selecting the required room type in a set up page hidden from end users.
- 5.3.7 Meeting spaces which are equipped with unique Audio-Visual features must be programmed so that they can be selected within the user set up page.
- 5.3.8 The audiovisual programmable controller must interface with all audiovisual sub systems.
- 5.3.9 The programmable controller must be equipped with one audio visual network interface connection.
- 5.3.10 All colour touch panel control function buttons must be accessible by selecting no greater than two touch panel control screens away from the home screen.
- 5.3.11 The touch panel must be powered over Power Over Ethernet connectivity

5.4 Integration with Furniture:

- 5.4.1 All audiovisual table top connection panel required cut outs must be coordinated with the furniture manufacturer.
- 5.4.2 All furniture where required must provide required cable pathways to allow cable whips to pass to required audiovisual transition connections.
- 5.4.3 Consideration must be given to the potential heat build-up of concealed audiovisual components and proper venting must be designed into all furniture.

5.5 Audio Visual Cabling Systems:

- 5.5.1 All microphone signal level cables must run in cable pathways and must be dressed separately from loudspeaker level and line signal level cables.
- 5.5.2 All line signal level cables must run in cable pathways and must be dressed separately from loudspeaker level cables.
- 5.5.3 All audiovisual cables requiring a solder joint must have the solder joint protected by an expandable sleeve.
- 5.5.4 Solder joint must be made using best practices and must be inspected for effects of cold solder joints.
- 5.5.5 All audio and control cables must have an expandable sleeve installed to cover the point where the cable jacket is cut back to expose the cable conductors.
- 5.5.6 All audiovisual cables must be grouped and dressed separately according to their system function. Each cable must be numbered with a simple numbering and letter system that must identify the cable system function. The cable numbering must not be repeated within the audiovisual system.
- 5.5.7 The cable numbering system must include the meeting room number as they are described in this document and in the drawings.
- 5.5.8 All audio cables carrying line signal levels and all microphone cables carrying microphone signal levels must be one twisted pair shielded, 22 AWG.
- 5.5.9 All control cables carrying separate control signals to a device must be one pair one pair 22 AWG.
- 5.5.10 All control cables connected to IP controlled devices must be UTP CAT 6
- 5.5.11 All loudspeaker cables carrying loudspeaker level signals regardless of voltage level or impedance must be terminated in two conductors 18 AWG cable.

- 5.5.12 All video signal cables carrying HD Base T signals must be shielded twisted four pair (STP) designed to carry digital media HD Base T signals.
- 5.5.13 All Audio-Visual cables must run in cable trays, conduits or cable raceways built into furniture.
- 5.5.14 Audio-Visual cables must not run exposed free across floors, connected to various furniture items.

5.6 Regulatory Requirements

- 5.6.1 The Audio-Visual Contractor must be responsible to ensuring and must certify that all electronics equipment supplied as part of the audiovisual system which operates above 24 Volts AC or DC is CSA /ULC listed and approved prior to delivery to the site.
- 5.6.2 The Audio-Visual Contractor must obtain any additional testing body certification required by the project.

6 Performance Specifications:

6.1 Audio Voice Lift System:

- 6.1.1 The acoustic gain of voice lift systems must be determined by sound level measurement differences with the voice lift system in the On and Off modes.
- 6.1.2 Speech intelligibility must be determined by measurement of STI performance of the space.
- 6.1.3 The testing sound source must be combined audio signal of 8 KHz, 4 KHz, 2 KHz, 1KHz, 500 Hz, 250 Hz, and 125 Hz reproduced by a calibration talk box device located at the front of the room.
- 6.1.4 Sound level pressure (SPL) must be determined by applying pink noise and measuring ear height at typical sitting position on axis of loudspeakers with an 'A' weighted slow response calibrated sound level meter.
- 6.1.5 Uniformity of sound level at seating position (seat to seat) must be determined by measurement at each seating position measured ear height at typical sitting position with an 'A' weighted slow response calibrated sound level meter.
- 6.1.6 Noise levels within the voice lift system must be determined by measurement from one selected loudspeaker directly connected to an 'A' weighted calibrated sound level meter, with the voice lift set to maximum
- 6.1.7 user gain level with no audio signal present. The difference measured

with and without the presence of an audio signal must be the system end to end signal to noise ratio. The audio signal for this test must be a professional calibrated 64dB speech source placed at one meter from the microphone capsule.

- 6.1.8 The microphone signals must be fed directly to the automatic mixer. The mixer algorithm must raise and lower the gain of the microphone rather than gate microphones on and off.

Microphones must have the capability of turning on (raising the gain) when an audio signal is present at that microphone, therefore all microphones must be active from the presence of an audio signal.

- 6.1.9 Microphones when active must not prevent other microphones from being active, to restrict the number of allowable active microphones.

- 6.1.10 End to End Audio System Performance Value:

10.1.8.1	Acoustic gain of voice lift	>12 dB
10.1.8.2	Sound pressure level (SPL)	>84 dB
10.1.8.3	Signal to noise	>70 dB
10.1.8.4	Seat-to-seat variance	±3 dB
10.1.8.5	Frequency response	100 Hz to 20 KHz.
10.1.8.6	Speech intelligibility (STI)	>.70

6.2 Audio Presentation System Performance:

- 6.2.2 Presentation audio in meeting spaces equipped with basic audio-visual presentation will be reproduced via the integrated display screen loudspeakers.
- 6.2.3 Presentation audio in meeting spaces which are connected to the main audio- visual equipment will be reproduced via ceiling recessed loudspeakers.
- 6.2.4 The ceiling loudspeakers must be tested in accordance with the appropriate testing sections for the voice lift systems.

6.3 Video Presentation System Performance:

- 6.3.2 Flat screens must be commercial grade.
- 6.3.3 The control system must control On / Off, Volume, Mute and Video Source selection.
- 6.3.4 Video system display must be tested for absence of cross modulation between AC power audio sources and other system

devices which may create hum bars, crawl or general instability must be determined by observing 'multiburst' and colour bar test patterns on the testing displaying devices while other sources such as audio signals are being reproduced both from voice lift and audio presentation sources.

6.3.6 Video displays must be tested for correct horizontal timing must be determined by displaying calibrated test colour bar signals and PC/laptop sources to ensure displayed image is correctly positioned or displayed without cutting off sides, top and bottom of test images.

6.3.7 Video display for correct operation of EDID must be determined by applying digital video colour bar signals at each input position and ensuring that the display input resolution is connecting to different inputs. The information must be confirmed by the legacy/digital calibrated test generator.

6.3.8 Correct operation of HDCP security keys must be tested with a calibrated test generator with ability to observe HDCP keys from input to output devices

6.4 End to End HD Base T Performance

HDCP Security Keys	Full HDCP compliance in signal chain
Video Processing	10 Bit colour
Video Cables HDMI	Tested to 12 bit colour
Colour Space	4.2.0
Native Resolution input thru to output	Minimum 1080P native
Matrix switching, encoders and Decoders (excluding displays maximum signal processing)	Minimum 1080P native
Input display signal resolutions	1080P 1080i 720P 720i 4K 1024 x 768 1280 x 720 1280 x 768 1280 x 1024 1365 x 1024 1400 x 1050 1600 x 1200 1680 x 1050 1920 x 1080

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Video Formats	HDMI, DVI, RGBHV
Video Output Signals	HD-Base T, HDMI, DVI

6.5 Control System:

- 6.5.2 All Audio-Visual devices must be controllable from the local basic or colour touch panel.
- 6.5.3 Rooms equipped with a touch panel must be linked to a programmable controller located in the main Audio-Visual equipment room.
- 6.5.4 The Atrium must be equipment with a wireless touch panel.
- 6.5.5 The controller must be capable of being monitored, updated and controlled via the separate Audio-Visual network system.
- 6.5.6 The controller must be equipped with a built-in screen to display status to confirm that the Audio-Visual systems are functioning and the selected meeting room features have been selected.
- 6.5.7 Rooms equipped with a basic button audio visual controller must be connected directly to the local room audio-visual equipment.

6.6 End to End Touch Panel Control System Performance:

Processor CPY	32 Bit
Memory SD Ram	>64MB
Memory NV Ram	>256KB
Memory Flash	>4MB
Compact/SD card memory	>2GB
Network	>10/100 Base T
IR ports	>8-1.2 MHz
I/O Ports	>8 0-24 volts DC
Relay Outputs	>8 N/O
RS232/422/485 Ports	1 amp 30 volts >6
Network Ports	>2
Touch Screen	Resistive or Captive membrane
Display Type	TFT colour LCD
Display Size	>9 inches 229mm
Aspect Ratio	15:9
Resolution	>800 x 480 Pixels
Viewing angle	+ 88°
Brightness	350 nits
Contrast	700:1>
Colour Depth	24 - Bit
Streaming Formats	MPEG
Full motion	PS

6.7 Video Display Performance:

- 6.7.2 All flat screen displays must be a minimum of 1080P native resolution in 16:9 aspect ratio.
- 6.7.3 The video display system must can display a native aspect ratio of 4:3 without the effect of stretching horizontally the image to fit the display screen.
- 6.7.4 The 4:3 image must be displayed within a true 16:9 electronics envelope such that the screen input circuitry will recognize the 4:3 image as a 16:9 and therefore will not apply image processing to stretch the image regardless of what menu settings relating to image size have been selected.
- 6.7.5 The Atrium Video Wall must consist of nine direct LED backlit separate displays with a maximum bezel width of 5.5mm in 16 x 9 viewing format.
- 6.7.6 The video processing to produce one composite image must be contained within the screens to provide title matrix technology with a simple copy function to apply the same setting from one display to all displays.
- 6.7.7 The video wall displays must be mounted on a pull-out wall mount to facilitate rear access for servicing. A video display wall calibrator kit must be provided and turned over to PSPC as part of the audio-visual system deliverables.

7.1 Video Switching and Routing:

- 7.1.1 Video display signals for meeting spaces connected to the main audio-visual equipment room system must be routed from their respective input connection device to various display connection devices via a central matrix switching systems which must employ HD-Base T signal format connectivity.
- 7.1.2 At each presentation video signal input position there must be an encoder capable of accepting legacy (VGA/audio) and digital (HDMI) signal inputs.
- 7.1.3 The encoding device must output either legacy or digital signals onto a UTP or STP cable in HD Base T signal connection format.
- 7.1.4 The presentation signal sources must be connected to separate input at the digital matrix switching equipment.

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- 7.1.5 The HD-Base T signal must include any presentation audio that may be present with the selected source.
- 7.1.6 The digital matrix switching equipment must have a separate output connected to each display device.
- 7.1.7 Digital matrix switcher outputs must be connected to a local decoder located at the display screen
- 7.1.8 The digital display signal must be scaled to a common 1080P 16:9 format
- 7.1.9 The selected meeting spaces connected to the main audio-visual room must have

their video signals routed via a central matrix switching system.

7.2 Video Switching Processing Equipment:

Switcher type	HD-Base T
Number of inputs	NR + 1
Number of outputs	NR + 1
Output signal formats	HD-base T, local loop thru of input signal type
Connectivity type	UTP, STP, Fiber
Processing	EDID, HDCP, CEC
Input output signal type	By card selection
Input resolution Digital HDMI-DVI	720 x 480 720 x 576 1920 x 1080

Input resolution legacy RGB	640 x 480 720 x 480 720 x 576 800 x 600 848 x 480 1024 x 768 1280 x 720 1280 x 768 1280 x 800 1280 x 960 1280 x 1024 1360 x 768 1365 x 1024 1366 x 768 1400 x 1050 1440 x 900 1600 x 900 1600 x 1200 1680 x 1050 1920 x 1080 2048 x 1080 2048 x 1152
Input resolutions	480i, 576, 480P, 576P 720P, 720i 1080i, 1080P and 4K
Maximum resolutions	4K
Private network mode	Via (1) rear panel 10 Base T/ 100 Base TX/ 1000 Base T LAN point

7.3 Video Conferencing System:

- 7.3.1 Video conferencing codecs must be installed in the main audio-visual equipment room.
- 7.3.2 The video codecs will be provided by PSPC and will be based on the CISCO model SX80. One Codec can be provided for testing and calibration and others will be available later for installation.

7.4 Audio Digital Signal Processing (DSP)

- 7.4.1 Audio DSP must be provided by a matrix mixer with adaptive proportional gainsharing algorithm providing full matrix cross point control.
- 7.4.2 The matrix mixing must provide the required audio input and output signal mapping to enable a mix minus voice lift system to be implemented.
- 7.4.3 Matrix mixers must provide enough inputs and outputs plus two

spare unused inputs and two spare unused outputs.

- 7.4.4 All microphones must be connected to a separate dedicated input for each microphone.
- 7.4.5 Voice lift system must provide excellent quality speech intelligibility and must be completely free from the effects of positive feedback, recirculated audio, compression and artifacts associated with excessive digital processing of the incoming audio signals.
- 7.4.6 The voice lift systems must be immune from typical smartphone interference.
- 7.4.7 The matrix mixer system must provide audio teleconferencing capabilities as a minimum must provide connection to one analog telephone line.
- 7.4.8 The teleconferencing interface maybe a separate interface or integrated into the matrix mixer hardware.
- 7.4.9 The teleconferencing interface must provide echo cancelling and full DSP.

7.5 Typical Audio DSP Performance:

Number of inputs (separate per input)	As required by number of sources plus 2
Number of outputs (separate per output device, including each loudspeaker zone)	As required by number of end points plus 2
Input gain	Maximum 20dB
System device gain	0dB to 56dB in 8dB steps
Phantom voltage	Selectable 48 volts
Dynamic range	102 dB
THD + Noise	0.01%
Headroom	20dB
Latency	1.33ms
Filter type	Butterworth Bessel Linkwitz
Filter mode	Low pass High pass Low shelving High shelving
Peaking EQ (parametric)	Frequency HZ bandwidth octave boost/cut dB
Internal signal generator	White noise Pink noise Tone sine wave
Sweep Modes	Single sweep Continuous sweep
Noise Reduction filter	6-35dB each input
Teleconferencing	Echo canceling

7.6 Audio Amplifier Processing:

- 7.6.1 All audio amplifier must have their output power rating rated at twice the required calculated output wattage to obtain the specified

maximum SPL signal level in each Room.

- 7.6.2 The twice maximum power rating is required to ensure that amplifier outputs will not go into automatic clip modes, thereby causing a DC voltage and current to be fed to loudspeaker voice coils.
- 7.6.3 Multi-channel audio amplifiers must not be configured or allowed to operate in a no- load condition

7.7 Audio Zone Amplifier Performance:

Frequency Response	20Hz – 20KHz
THD 20Hz – 20KHz for 1 W	0.1%
Signal to noise ratio	.90dB
Power rating	Max required plus 100% into 8-ohm load
Output impedance voice lift	4, 8 and 16 ohms
Output Power	Minimum 50 watts
Number of channels	As required to suit re
Channel separation (cross talk)	At 1KHz > 70dB
Input common mode rejection	50dB
Level adjustment per channel	Front panel
Input	Phoenix balanced
Nomad link in out connection	RJ45
Nomad link function	Power average limiter (PAC) power on per channel

7.8 Ceiling Loudspeakers:

- 7.8.1 All loudspeakers must be flush mounted in ceiling.
- 7.8.2 All loudspeakers must be a self-contained sealed metal back box can with removable front grill to access power and impedance taps.
- 7.8.3 All loudspeakers mounted in lay in ceiling must employ a suitable sized tile bridge.
- 7.8.4 All loudspeakers mounted in drywall or continuous ceiling must employ a steel split ring backer for clamping purposes so as not to crush ceiling material.
- 7.8.5 All loudspeakers must be connected in same polarity such that a positive audio signal causes the loudspeaker cone to move in a forward direction.
- 7.8.6 All ceiling loudspeakers must be capable of handling twice the required power to obtain the required SPL level.

7.9 Typical Ceiling Loudspeaker Performance:

Dimensions	600 x 80 x 90 mm
Weight	3Kg
Input voltage	100V
Frequency range at – 10dB	190Hz – 18 KHz
SPL at 30 watts 2 KHz 1 meter	108dB
Rated power	30/15/7.5 watts
Maximum power	45 watts

7.10 Typical Line Array Loudspeakers Performance

- 7.10.1 Atrium area must be equipped with wall mounted line array loudspeakers.
- 7.10.2 The Atrium line array loudspeakers must be mounted to the columns as indicated in the audio-visual drawings. The final mounting height must be determined by the final site condition. These loudspeakers must form part of the Atrium voice lift system

7.11 Typical Line Array Loudspeaker Specification:

Continuous Power	>150 Watt
Impedance to suit	8 Ohm and 70 Volt
Sensitivity	92db measured at 1m and 8m
Frequency response	90- 17,000 Hz
Sound Source	To provide a linear sound coverage of the Atrium area
Wall mounted adjustable	Adjustable wall mounting hardware included

7.12 Microphones:

- 7.12.1 Table integrated microphones must be typical of Clock Audio C011E-RF low profile through table top mounting, boundary layer.
- 7.12.2 Table microphones mounted on table surface must be typical of Clock Audio CS series boundary layer with a half cardioid polar pattern in two, three and four element configurations as indicated in the audio-visual drawings.

7.13 Microphone Low Profile Through Table:

Type and length	Low Profile through table mounted
Pick-up pattern	Omi-Directional Boundary layer
Frequency response	50 Hz - 18KHz
Low frequency roll off	80Hz 12dB per octave
Impedance	200 Ohms
Maximum input sound level	120 dB SPL
THD	1% @ 1Kz

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Phantom Power range	9 – 48 volts DC 2ma
Element type	Fixed charge back plate permanently polarized condenser
Maximum dynamic range	115dB 1 KHz @ max SPL
Signal to noise ratio	69Db(A) 1KHz @ 1 Pa
Shielding	RFI
Finish	Satin black

7.14 Microphone Boundary Layer 3 Element:

Type	Boundary layer
Pick up pattern	OMNI directional
Impedance	200 ohms
Frequency response	50Hz - 20 KHz
Signal to noise ratio	58 dB (A)
Maximum input level	120 dB SPL
Phantom power range	9 – 48 volts DC
Low frequency roll off	4dB per octave @ 400 Hz 6dB per octave @ 100Hz
Finish	Satin Black

7.15 Microphone Boundary Layer 4 Element:

Type	Boundary layer
Pick-up pattern	Omi- Directional
Frequency response	50Hz - 20 KHz
Impedance	200 ohms
Phantom power range	9 – 48 volts DC 2ma
Maximum input sound level	120dB SPL @ 1 KHz
Dynamic range	112 dB @ 1 KHz at MAX SPL
Connector	Male XLR
Signal to noise ratio	58 dB (A) 1KHz @ 1Pa
Element type	Fixed charge back plate permanently polarized condenser

7.16 Audio Visual Cable:

Cable Function	Description	Rating
Audio Microphone Level	Twisted pair beldfoil aluminum polyester shielded, 22 AWG stranded tinned copper, drain wire. Outside diameter ,180" nominal capacity no greater than 47PF per foot	FT6/FT4 as required
Audio line level	Twisted pair beldfoil aluminum polyester shielded, 22 AWG stranded tinned copper, drain wire. Outside diameter ,180" nominal capacity no greater than 47PF per foot	FT6/FT4 as required
Loudspeaker level	18AWG twisted pair, outside diameter .020"	FT6/FT4 As required
HD-Base T STP cable	Ultra-high performance CAT5e, shielded twisted pair, DC resistance 28.6 ohms per 1000' Impedance 100 ohms' Capacitance 17.1 PF/foot. Conductor 24 AWG 4 twisted pairs Colours blue /white orange/white Green/white, brown/white Outside diameter 0.24" Maximum pull tension 25 LBF	FT6/FT4 As required
Loudspeaker	1 Pair 18AWG stranded bare copper red/black	FT6/FT4 As required

7.17 Termination Performance:

Cable Type	Connector Type	Pin out
Microphone	Male/female XLR 3 pin	Pin one shield Pin two Positive Pin three Negative
Microphone at mixers	Phoenix	In accordance with manufacturer's connection requirement
STP 4 Pair cables	RJ45 shielded jacks and female panel mounted jacks	Punch down EIA 568B
Line level wall jacks	Male/Female XLR 3 pin Female equipped with lock	Pin one shield Pin two Positive

		Pin three Negative
Unbalanced audio	RCA male	Centre pin positive, ring ground shield return N/C
Loudspeaker	Female metal mounted Speakon four pole, male cord grip four pole	Zone 1 Pin 1 positive Pin 2 negative Zone 2 Pin 3 Positive Pin 4 positive

7.18 Racks and cable:

7.18.1 Audio-Visual racks must be installed in the main Audio-Visual equipment room and the racks must be floor standing.

10.20.3 All Audio-Visual cable installed during the construction phase must be coiled and protected.

7.19 Audio Visual Rack Performance:

Equipment mounting	19"
Number of rack mounting unit	42
Lacing bars	Horizontal lacing bars to suit site rack layout
Rack Rails	2 pairs 11 gauge fixed threaded
Depth	20"
Gauge of steel top and bottom	13
Finish	Black
Power Bar	15 Amp power to 8 rear outlets with surge suppression
Fill panels	As required to fill all rack empty spaces.

7.20 Flush Mounting Audio Visual Connection Point Devices:

7.20.1 Integrated Audio-Visual connection point devices must be provided accordance with design concepts contained in the Audio-Visual and millwork drawing to provide microphone shock mounting, table integrated connection panels and touch panels.

7.20.2 The jack description for HDMI and VGA/Audio must be if not marked by the manufacturer be silk screened to the panel to indicate inputs and outputs.

7.21 AV System Grounding:

7.21.1 All Audio-Visual system racks must be grounded utilizing a separate ground cable connected to a true earth or ground point minimum #8 size.

- 7.21.2 All audio cables must only be connected to ground only at an Audio-Visual rack.
- 7.21.3 The ground connection must pass from the equipment ground thru any interconnecting connector to ensure a continuous cable shield connection.

7.22 Audio Visual Cabling Standard:

- 7.22.1 All cables running outside of conduit and wire ways must be dressed utilizing suitable cable ties every four inches along cable bundle. STP and UTP cable must be dressed utilizing Velcro cable ties so as not to crush the cables. No plastic cable ties must be used on STP or UTP cables.
- 7.22.2 All cables must be tested for continuity high resistance and intermittent short circuits. Test results must be recorded and become part of the as built packages.
- 7.22.3 All microphone level cables must be dressed separately from loudspeaker and line level cables.
- 7.22.4 All line level cables must be dress separately from microphone and loudspeaker cables.
- 7.22.5 All loudspeaker cable must be dress separately to microphone cables.
- 7.22.6 All connectors requiring soldering must have the solder joint protected by utilizing either expandable cable sleeve system.
- 7.22.7 All audio and control cables must have sleeves installed to cover the point where the cable jacket is cut back to expose the conductors by utilizing expandable cable sleeve system.
- 7.22.8 All cables must be grouped and numbered at both ends with cable numbering system. The numbers must be unique to each cable and must not be repeated. Cable must be labeled with permanent label markers.
- 7.22.9 The equipment racks must be equipped with front switched and fused power bar with a minimum of six AC sockets available inside the equipment rack and one accessible from the front of the rack. The number of power bars must be determined by the equipment AC requirements. The power bar must provide surge protection and be equipped with an EMI filter. Additional rack power bars if required must be mounted vertically within the equipment rack.
- 7.22.10 All rack mounted equipment requiring a 110 Volt connection must be connected to an internal rack mounted suitable power outlet.
- 7.22.11 No AC residential type power bars or AC blocks to expand individual outlet capacity, must be used.

8 TESTING and REPORTING:

- 8.1 All wiring within the equipment racks and connection panel devices must be checked for loose connections, correct terminations and compliance with wiring diagrams. In addition, functional checks must be carried out to ensure that all inter-locking and sequencing is in accordance with performance specifications.
- 8.2 All wiring and terminations must be checked for continuity and isolation.
- 8.3 All relays, panel mounted switches, RS232, IR, microphone and loudspeaker connections must be tested for correct operation. Test results must be part of the as wired package.
- 8.4
- 8.5
- 8.6
- 8.7
- 8.8 Throughout the test period of commissioning, audio and video systems must be powered up and working to demonstrate that there is no unintended interaction between the various sub-systems.
- 8.9 Pre-set audio levels throughout system must be recorded as part of the as-wired package.
- 8.10 All line and microphone level inputs and outputs that are adjustable, programmable or selectable in software must have their function name relating to this project recorded in the User Interface software. This software must become part of the as built package.
- 8.11 Each microphone input and cable must be tested for the following:
 - 8.11.1 Output level uniformity
 - 8.11.2 Polarity
 - 8.11.3 Freedom from hum or noise
 - 8.11.4 Freedom from shock, strain excited hum or noise
 - 8.11.5 Loose parts and poor construction.
- 8.12 Each audio device cable must be tested for the following:
 - 8.12.1 Impedance
 - 8.12.2 Continuity
 - 8.12.3 Operation and control.

8.13 The tests must include the following:

- 8.13.1 Physical inspection and quality survey of all material.
- 8.13.2 Testing of each speaker to ascertain that none of them squawk or rattle when energized to a level of 90 dB from a sweep 100Hz to 20 KHz test signal. Each loudspeaker must be tested to ensure all are in same phase with a loudspeaker phase tester.
- 8.13.3 Functional tests of all audio equipment.
- 8.13.4 Phasing of all microphones, microphone cables and microphone inputs.
- 8.13.5 Measure the power output and distortion of each power amplifier at full load and maximum drive.
- 8.13.6 Measure the load impedance of all speaker circuit loads at 1000 Hz.
- 8.13.7 Subjective listening test under normal operating conditions.
- 8.13.8 Measure the system end to end performance to verify tuning.
- 8.13.9 Ensure that the system is free of short circuits, ground loops, parasitic oscillation, instability and open circuits.
- 8.13.10 Voice lift system must be evaluated utilizing a real-time room analyser and a professional talk box connected to the required audio test signals. This test must be performed at the Judges microphone with all other microphones muted. The systems must be equalized utilizing a pink noise generator. The analysing equipment must conform to the ANSI S1.11-1966 1976) class I filter standards.
- 8.13.11 The gain of the voice lift system must provide a minimum of 12 dB, before feedback (see performance end to end testing).
- 8.13.12 The end to end frequency response must be tested and recorded as part of the as- wired package.
- 8.13.13 The gain of the voice lift system must provide a measured seat to seat consistency of ± 3 dB from any seating position within the meeting space that is equipped with voice lift.
- 8.13.14 The voice lift system must be tested for speech intelligibility performance by testing with professional audio testing equipment

	capable of evaluating in both RAST and STI formats. These test results to become part of the as-wired package. STI rating of .7 is the minimum acceptable result from this test.
8.13.15	Minimum Acoustic Gain for the Voice lift system >12 dB
8.13.16	Minimum sound pressure level capability of the voice lift system > 80 dB
8.13.17	Uniformity of sound level ± 3 dB SPL
8.13.18	Noise levels within the voice lift system < 3%
8.13.19	Minimum frequency Response minimum 10 Hz to 10 KHz
8.13.20	Minimum PC display resolution capability to be 1280 x 1024 and HD at 1080P
8.14	The video presentation system must be tested for the following:
8.14.1	End to end visual display performance must be tested utilizing display screen with Multiburst, grey scale low and high frequencies test patterns and colour bars video signals
8.14.2	Video displays must be tested for absence of cross modulation between AC power, audio sources and any other devices which may create hum bars, crawl or general image instability.
8.14.3	PC and laptop display signals must be verified for correct horizontal timing to ensure displayed image is correctly displayed on screens.
8.14.4	HDMI signals must be tested with HDMI signal analysing equipment to ensure that the HDCP security keys are transferred from the source device to the final display devices.
8.14.5	All cables carrying digital media platform signals must be performance tested using a professional network analysing test set with capability of providing a printed test report which must become part of the commissioning and testing documentation.
8.14.6	All STP UTP CAT6 Audio-Visual cables must be tested end to end performance to a minimum of 1G.
8.14.7	Each AC outlet which is supplying AC power to the Audio-Visual sub-systems, must be tested for polarity, voltage level, voltage fluctuation and harmonic content. If any abnormalities are found these are to be

reported to the Electrical and General Contractor's for resolution. The tests must be performed during typical operating electrical loads.

9 SYSTEM CERTIFICATION:

- 9.1 The Audio-Visual Contractor must perform the tests outlined in this specification and must further certify the tests in a detailed commissioning report.
- 9.2 The test results must be recorded and provided as part of the as wired and as built drawing / manuals package.
- 9.3 The commissioning report as wired, as built drawing and equipment manuals must be provided by the Audio-Visual Contractor a minimum of two weeks prior to the scheduled final site review. This must be completed for each phase as per project schedule.

10 Technical Standards and Documentation

- 10.1 All software including graphical user interfaces, code written to the Audio-Visual system controller, matrix switchers, matrix mixers and other software-based devices must meet the manufacturer's and general industry programming standards and best practices.
- 10.2 All user touch panel screens must not exceed two sub-screens from the home screen.
- 10.3 All meeting spaces audiovisual control systems must be programmed with a master single control system file and must provide an administration page password, protected to allow features as required to be enabled or disabled Where feedback from audiovisual device is required the feedback must be true equipment feedback and must not be simulated or timed to appear as device feedback.
- 10.4 All devices that contain user defined information must have the device label recorded in the user interface programming tool. This information in electronic format must become part of the as built package.

All user interface and control system created files required to program or re- program, equalize or test the audiovisual system such as frequency response noise criteria and speech intelligibility and control system functionality, must be provided in hard copy as part of the final commissioning report together with an uncompressed electronic reproducible disk copy.
- 10.5 As-wired and as-built drawings must be provided as part of the

required as built audiovisual system package.

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- 10.6 Three complete hard copy sets of manuals and drawings must be provided.
 - 10.7 All audiovisual system drawings must be created in AutoCAD current version at time of the Audio-Visual installation.
 - 10.8 All audiovisual equipment must be recorded with manufacturer's name, model and serial numbers. This information must form part of the final as built package.
A separate drawing must be provided for each sub-system:
 - 10.10.1 Audio riser and equipment connectivity
 - 10.10.2 Voice lift and recording system
 - 10.10.3 Remote control system
 - 10.10.4 Matrix mixer screen shots of mapping and equalization
 - 10.10.5 Video evidence infrastructure riser and equipment connectivity
 - 10.10.6 Audio equipment rack layouts
 - 10.10.7 Room audiovisual layouts
 - 10.11 The final Audio-Visual system report must contain test results for: all loudspeakers polarity (phase) test
 - 10.11.1 Loudspeaker to microphone mapping
 - 10.11.2 All microphone phase tests
 - 10.11.3 Speech intelligibility STI
 - 10.11.4 HDCP compliance from all input to all output positions.
 - 10.11.5 Verification of correct functionality of EDID tables for multiple resolutions
 - 10.11.6 Video presentation system native resolution tests
 - 10.11.7 Audio/video synchronization
 - 10.11.8 Audio Visual cable inspection
 - 10.11.9 Verification of all equipment cable labeling
 - 10.11.10 Verification of all required Audio-Visual cable separation
 - 10.11.11 Control system user interface performance
 - 10.11.12 Verification of full audio-visual system power down and power up tests
 - 10.11.13 Verification of audio visual system grounding
 - 10.11.14 Verification of audio visual systems network topology
 - 10.11.15 Verification of audio visual IP address and system device identification of all matrix mixers, matrix switchers and controllers

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- 11.1 The Audio-Visual equipment must be guaranteed by warranty to be new and free from defects in materials and workmanship including parts and labour, for a period of twenty-four months from the date of substantial completion of the project.
- 11.2 Existing equipment is required by PSPC to be reused by the Audio-Visual Contractor it must be tied to the full system warranty for a period of twenty-four months without additional cost to PSPC.
- 11.3 If any material or quality of work should prove to be faulty within the duration of the warranty period, the Audio-Visual Contractor without cost to PSPC must:
- 11.4 Repair any defective workmanship or replace the defective materials within five working days.
- 11.5 Respond to calls and emails for technical assistance within three hours.
- 11.6 The Audio-Visual Contractor must provide within the warranty period up to three service calls. PSPC must have the right to use the service calls for instruction of personnel, making adjustment or request programming changes that are within the functioning capability of the system. This must be made at the request of PSPC without cost to PSPC.
- 12 TRAINING**
- 12.1 The Audio-Visual Contractor must provide instruction on all facets of the audio equipment to PSPC's operational staff. They must be instructed in sufficient depth to be able to operate the Audio-Visual systems and identify if they are not functioning correctly. The instruction may be to large or small groups and may not be done at the same time. Two full days must be provided, one for administration.
- 12.2 The Audio-Visual Contractor must provide a set of quick start sheets with screen shots of how to quick start the Audio-Visual systems.
- 13 TEST EQUIPMENT**
- 13.1 All test equipment used must be professional of industry accepted standards in quality, manufacture and measuring capability. The following is a suggested minimum, but not limited to:
- 13.1.1 Sound level meter such as Bruel and Kjaer or NTI c/w calibrator.
- 13.1.2 Real time analyzer to provide PC based file and print out such as NTI, TIF, Bruel Kjaer.
- 13.1.3 Sine wave generator such as NTI, Leader or HP.
- 13.1.4 Loudspeaker phase tester such as Galaxy or NTI.
- 13.1.5 High quality talk box voice playback system connected to portable high quality amplifier and loudspeaker for testing speech intelligibility such as NTI.

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- 13.1.6 AC testing for voltage, current, wattage and harmonic content such as Fluke.
 - 13.1.7 UTP and STP cable tester for impedance, continuity, cable length and performance such as Fluke Network Tester
 - 13.1.8 PC legacy resolution tester such as Extron pattern test generator.
 - 13.1.9 Video colour bar test generator such as Leader, Tektronix. Or Quantum
 - 13.1.10 HDMI digital test generator set such as Quantum.

14 REFERENCES

- 14.1 BICSI AV design reference manual 2006
- 14.2 TIA-569-B (supersedes TIF/EIA-569-A and its addendum Oct 2004)
- 14.3 TIA 606-A Revision of TIA/EIA 606 May 2009
- 14.4 TIA0568-C-1 Feb 2009
- 14.5 TIA 862 April 2002
- 14.6 TIA-569-B-1 Addendum to TIA-569-B May 2009
- 14.7 TIA-568-C-3 June 2008
- 14.8 TIA 606-A-1 Nov 2008
- 14.9 TIA 568-C-0-1 Sept 2010
- 14.10 TIA 568-C-0 Feb 2009
- 14.11 J-STD-607A Oct 2002
- 14.12 TIA 568-C-2 Aug 2009
- 14.13 BICSI Telecommunications Distribution method manual 12th Edition Volume 1 and 2

END OF SECTION

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ANNEX A- Appendix 1 DRAWINGS

Attached.

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ANNEX B
BASIS OF PAYMENT

Provide a separate itemized cost in Canadian Dollars, as per the Audio-Visual rooms detailed in Annex A - Statement of Work in the chart below:

ROOMS	UNIT PRICE	
CLOSED COLLAB.	Equipment	\$
	Material	\$
	Installation	\$
	Programming	\$
	Commissioning	\$
	Training	\$
	TOTAL	\$ _____

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MAIN AV ROOM	Equipment	\$
	Material	\$
	Installation	\$
	Programming	\$
	Commissioning	\$
	Training	\$
	TOTAL	\$ _____
SM. MEETING ROOM	Equipment	\$
	Material	\$
	Installation	\$
	Programming	\$
	Commissioning	\$
	Training	\$
	TOTAL	\$ _____
MED. MEETING ROOM	Equipment	\$
	Material	\$
	Installation	\$
	Programming	\$
	Commissioning	\$
	Training	\$
	TOTAL	\$ _____

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CCC No./N° CCC - FMS No./N° VME

BTV / CONFERENCE	Equipment	\$
	Material	\$
	Installation	\$
	Programming	\$
	Commissioning	\$
	Training	\$
	TOTAL	\$ _____
COMPUTER TRAINING	Equipment	\$
	Material	\$
	Installation	\$
	Programming	\$
	Commissioning	\$
	Training	\$
	TOTAL	\$ _____
LARGE. MEETING ROOM	Equipment	\$
	Material	\$
	Installation	\$
	Programming	\$
	Commissioning	\$
	Training	\$
	TOTAL	\$ _____

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tor215
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ATRIUM	Equipment	\$
	Material	\$
	Installation	\$
	Programming	\$
	Commissioning	\$
	Training	\$
	TOTAL	\$ _____

TOTAL EVALUATED PRICE - Aggregate of each room total in the table above

\$ _____

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ANNEX C
SECURITY REQUIREMENTS CHECKLIST

Attached

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ANNEX D EVALUATION CRITERIA

#	MANDATORY CRITERIA	Validation
		Provide section and page number
M1	The Contractor must attend the Mandatory Site Visit.	This will be validated by the contractor's signature on the PSPC sign-in sheet from the site visit.
M2	The Contractor must provide a valid CISC security clearance certificate or certificate number in accordance with the security requirement detailed in Resultant Contract 6.1 Security Requirements.	
M3	<p>The Contractor must provide three reference projects that demonstrate the firm's experience in the overall Project management and accountability to deliver a project for the design and supply, installation and integration of videoconferencing, audio conferencing and local presentation.</p> <p>The experience of the firm in three similar projects (similar scope and size) should be clearly identified by providing the following information d who is familiar with each reference project:</p> <ul style="list-style-type: none"> A. Project Name; B. Name of client organization and work performed in the course of the contract; C. Year and duration of the project; D. Brief description of the project including scope; E. Contact information of a reference in the client organization <p>Demonstrates how each listed past project is comparable/relevant to the requested project</p>	
M4	<p>The Bidder must provide CV for the Senior Project Manager who will be assigned to this project (max 5 pages) whom has at least 5 years project management experience.</p> <p>For each CV must identify the following criteria:</p> <ul style="list-style-type: none"> A. Years of experience – must have a minimum of five years; B. Professional accreditation, accomplishment, achievements during that time frame; and show Relevant experience, expertise, competence 	

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M5	<p>Provide CVs for each of the following members of the contractor's project team:</p> <ol style="list-style-type: none">1.The System programmer2. The Senior technician3. System Design Engineer4. Installer <p>For each CV must identify the following criteria:</p> <ol style="list-style-type: none">A. Years of experience – must have a minimum of three years;B. Professional accreditation, accomplishment, achievements during that time frame; and <p>Show Relevant experience, expertise, competence</p>	
M6	<p>The Bidder must include completed room data sheets for each room listed in ANNEX A, Statement of Work. Each room data sheet will list all equipment, including detailed list of all proposed equipment, display technology, control and cabling proposed for the room and detailed list of all proposed equipment. Bidder must submit room data sheets in the format outlined in ANNEX A.</p>	

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ANNEX E

ELECTRONIC PAYMENT INSTRUMENTS

ELECTRONIC PAYMENT INSTRUMENTS

As indicated in Part 3, clause 3.1.2, the Bidder must identify which electronic payment instruments they are willing to accept for payment of invoices.

The Bidder accepts any of the following Electronic Payment Instrument(s):

- ☐ () VISA Acquisition Card;
- ☐ () MasterCard Acquisition Card;
- ☐ () Direct Deposit (Domestic and International);
- ☐ () Electronic Data Interchange (EDI);
- ☐ () Wire Transfer (International Only);
- ☐ () Large Value Transfer System (LVTS) (Over \$25M)

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ANNEX "F"

ADDITIONAL CERTIFICATIONS

1. Board of Directors

In accordance with Section 1, Integrity Provisions – Bidder, Bidders are required to provide a list of their Board of Directors before contract award. Bidders are requested to provide this information in their bid.

Director Name - _____

Director Name - _____

Director Name - _____

Director Name - _____

Director Name - _____

Director Name - _____

Director Name - _____

Director Name - _____

2. Procurement Business Number (PBN)

In accordance with Section 2, Procurement Business Number, of the Standard Instructions, Offerors are required to have a Procurement Business Number (PBN) before Contract award.

Procurement Business Number - _____

Suppliers may register for a PBN online at [Supplier Registration Information](#). For non-Internet registration, suppliers may contact the InfoLine at 1-800-811-1148 to obtain the telephone number of the nearest Supplier Registration Agent.

3. General Environmental Criteria Certification

The Bidder must select and complete one of the following two certification statements.

A) The Bidder certifies that the Bidder is registered or meets ISO 14001.

Bidders' Authorized Representative Signature

Date

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or

B) The Bidder certifies that the Bidder meets and will continue to meet throughout the duration of the contract, a minimum of four (4) out of six (6) criteria identified in the table below.

The Bidder must indicate which four (4) criteria, as a minimum, are met.

Green Practices within the Bidders' organization	Insert a checkmark for each criterion that is met
Promotes a paperless environment through directives, procedures and/or programs	
All documents are printed double sided and in black and white for day to day business activity unless otherwise specified by your client	
Paper used for day to day business activity has a minimum of 30% recycled content and has a sustainable forestry management certification	
Utilizes environmentally preferable inks and purchase remanufactured ink cartridges or ink cartridges that can be returned to the manufacturer for reuse and recycling for day to day business activity.	
Recycling bins for paper, newsprint, plastic and aluminum containers available and emptied regularly in accordance with local recycling program.	
A minimum of 50% of office equipment has an energy efficient certification.	

Bidders' Authorized Representative Signature

Date



SEP 12 2017

Contract Number / Numéro du contrat

EQ754-181239

Security Classification / Classification de sécurité
UNCLASSIFIED

SECURITY REQUIREMENTS CHECK LIST (SRCL)
LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine		Public Works and Government Services Canada	2. Branch or Directorate / Direction générale ou Direction RPB	
3. a) Subcontract Number / Numéro du contrat de sous-traitance			3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant	
4. Brief Description of Work / Brève description du travail Audio/Video goods and services supply				
5. a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?			<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?			<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
6. Indicate the type of access required / Indiquer le type d'accès requis				
6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)			<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.			<input type="checkbox"/> No Non	<input checked="" type="checkbox"/> Yes Oui
6. c) Is this a commercial courier or delivery requirement with no overnight storage? S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit?			<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès				
Canada <input type="checkbox"/>		NATO / OTAN <input type="checkbox"/>		Foreign / Étranger <input type="checkbox"/>
7. b) Release restrictions / Restrictions relatives à la diffusion				
No release restrictions Aucune restriction relative à la diffusion <input type="checkbox"/>		All NATO countries Tous les pays de l'OTAN <input type="checkbox"/>		No release restrictions Aucune restriction relative à la diffusion <input type="checkbox"/>
Not releasable À ne pas diffuser <input type="checkbox"/>				
Restricted to: / Limité à: <input type="checkbox"/>		Restricted to: / Limité à: <input type="checkbox"/>		Restricted to: / Limité à: <input type="checkbox"/>
Specify country(ies): / Préciser le(s) pays:		Specify country(ies): / Préciser le(s) pays:		Specify country(ies): / Préciser le(s) pays:
7. c) Level of information / Niveau d'information				
PROTECTED A PROTÉGÉ A <input type="checkbox"/>		NATO UNCLASSIFIED <input type="checkbox"/>		PROTECTED A PROTÉGÉ A <input type="checkbox"/>
PROTECTED B PROTÉGÉ B <input type="checkbox"/>		NATO NON CLASSIFIÉ <input type="checkbox"/>		PROTECTED B PROTÉGÉ B <input type="checkbox"/>
PROTECTED C PROTÉGÉ C <input type="checkbox"/>		NATO RESTRICTED <input type="checkbox"/>		PROTECTED C PROTÉGÉ C <input type="checkbox"/>
CONFIDENTIAL CONFIDENTIEL <input type="checkbox"/>		NATO DIFFUSION RESTREINTE <input type="checkbox"/>		CONFIDENTIAL CONFIDENTIEL <input type="checkbox"/>
SECRET <input type="checkbox"/>		NATO CONFIDENTIAL <input type="checkbox"/>		SECRET <input type="checkbox"/>
TOP SECRET <input type="checkbox"/>		NATO CONFIDENTIEL <input type="checkbox"/>		TOP SECRET <input type="checkbox"/>
TOP SECRET (SIGINT) <input type="checkbox"/>		NATO SECRET <input type="checkbox"/>		TOP SECRET (SIGINT) <input type="checkbox"/>
TRÈS SECRET (SIGINT) <input type="checkbox"/>		NATO SECRET <input type="checkbox"/>		TRÈS SECRET (SIGINT) <input type="checkbox"/>
		COSMIC TOP SECRET <input type="checkbox"/>		
		COSMIC TRÈS SECRET <input type="checkbox"/>		



PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? ☒ No ☐ Yes
Non Oui

If Yes, indicate the level of sensitivity:

Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate? ☒ No ☐ Yes
Non Oui

Short Title(s) of material / Titre(s) abrégé(s) du matériel :

Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> RELIABILITY STATUS
COTE DE FIABILITÉ | <input type="checkbox"/> CONFIDENTIAL
CONFIDENTIEL | <input type="checkbox"/> SECRET
SECRET | <input type="checkbox"/> TOP SECRET
TRÈS SECRET |
| <input type="checkbox"/> TOP SECRET- SIGINT
TRÈS SECRET - SIGINT | <input type="checkbox"/> NATO CONFIDENTIAL
NATO CONFIDENTIEL | <input type="checkbox"/> NATO SECRET
NATO SECRET | <input type="checkbox"/> COSMIC TOP SECRET
COSMIC TRÈS SECRET |
| <input type="checkbox"/> SITE ACCESS
ACCÈS AUX EMPLACEMENTS | | | |

Special comments:

Commentaires spéciaux : _____

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.

REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work?
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? ☐ No ☒ Yes
Non Oui

If Yes, will unscreened personnel be escorted?
Dans l'affirmative, le personnel en question sera-t-il escorté? ☐ No ☒ Yes
Non Oui

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises?
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS? ☒ No ☐ Yes
Non Oui

11. b) Will the supplier be required to safeguard COMSEC information or assets?
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC? ☒ No ☐ Yes
Non Oui

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises?
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ? ☒ No ☐ Yes
Non Oui

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data?
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS? ☒ No ☐ Yes
Non Oui

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency?
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale? ☒ No ☐ Yes
Non Oui



PART C - (continued) / PARTIE C - (suite)

For users completing the form **manually** use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.

Les utilisateurs qui remplissent le formulaire **manuellement** doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form **online** (via the Internet), the summary chart is automatically populated by your responses to previous questions. Dans le cas des utilisateurs qui remplissent le formulaire **en ligne** (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category Catégorie	PROTECTED PROTÉGÉ			CLASSIFIED CLASSIFIÉ			NATO				COMSEC					
	A	B	C	CONFIDENTIAL	SECRET	TOP SECRET	NATO RESTRICTED	NATO CONFIDENTIAL	NATO SECRET	COSMIC TOP SECRET	PROTECTED PROTÉGÉ			CONFIDENTIAL	SECRET	TOP SECRET
				CONFIDENTIEL		TRÈS SECRET	NATO DIFFUSION RESTREINTE	NATO CONFIDENTIEL		COSMIC COSMIC TRÈS SECRET	A	B	C	CONFIDENTIEL		TRÈS SECRET
Information / Assets Renseignements / Biens Production																
IT Media / Support TI																
IT Link / Lien électronique																

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?
La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

☒ No
Non ☐ Yes
Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".

Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?
La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

☒ No
Non ☐ Yes
Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).

Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquez qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).



Government of Canada
Gouvernement du Canada

Contract Number / Numéro du contrat

EQ754-181239

Security Classification / Classification de sécurité
UNCLASSIFIED

PART D - AUTHORIZATION / PARTIE D - AUTORISATION

13. Organization Project Authority / Chargé de projet de l'organisme

Name (print) - Nom (en lettres moulées)	Title - Titre	Signature
Best, Sean	Project Team Leader	
Telephone No. - N° de téléphone 416-274-1786	Facsimile No. - N° de télécopieur 416-512-5944	E-mail address - Adresse courriel sean.best@pwgsc.gc.ca
Date 2017/09/07		

14. Organization Security Authority / Responsable de la sécurité de l'organisme

Name (print) - Nom (en lettres moulées)	Title - Titre	Signature	Digitally signed by VonZuben, John Date: 2017.09.12 09:32:25 -04'00'
von Zuben, John	SO		
Telephone No. - N° de téléphone 416-512-5968	Facsimile No. - N° de télécopieur 416-529-6481	E-mail address - Adresse courriel John.vonZuben@pwgsc.gc.ca	Date 2017-09-12

15. Are there additional instructions (e.g. Security Guide, Security Classification Guide) attached?
Des instructions supplémentaires (p. ex. Guide de sécurité, Guide de classification de la sécurité) sont-elles jointes?

☒ No
Non ☐ Yes
Oui

16. Procurement Officer / Agent d'approvisionnement

Name (print) - Nom (en lettres moulées)	Title - Titre	Signature
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel
		Date

17. Contracting Security Authority / Autorité contractante en matière de sécurité

N Linda Daly Agente à la Sécurité des contrats Contract Security Officer Programme de la Sécurité industrielle Industrial Security Program Linda.Daly@tpsgc-pwgsc.gc.ca Téléphone : 613 957-9337	Signature 	E-mail address - Adresse courriel Date Sept 12/17
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