



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

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

**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

Electrical & Electronics Products Division
L'Esplanade Laurier
East Tower, 4th floor,
Ottawa
Ontario
K1A 0S5

Title - Sujet audio visual equipment	
Solicitation No. - N° de l'invitation 40021-181639/A	Date 2018-11-30
Client Reference No. - N° de référence du client 40021-181639	
GETS Reference No. - N° de référence de SEAG PW-\$\$HN-331-75923	
File No. - N° de dossier hn331.40021-181639	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-01-14	Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Turner, Louie	Buyer Id - Id de l'acheteur hn331
Telephone No. - N° de téléphone (613) 297-3769 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Specified Herein Précisé dans les présentes	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée 2019-03-29	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



Destination Code - Code destinataire	Destination Address - Adresse de la destination	Invoice Code - Code bur.-comptable	Invoice Address - Adresse de facturation
D - I	Administative Tribunals Support Services of Canada ISST 344 Slater Street Ottawa, ON K1R 5Y7	I - I	Administrative Tribunals Support Services of Canada ISST 333 Laurier Street, West, 15th floor Ottawa, ON K1A 0G7 Att: Kim Laforge, Accomodations Manager

Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM Destination Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
1	audio visual equipment Supply and Install fully functional Audio Video systems as per Annex A - SOW, Annex B - Audio system Specification for Installation, Appendix A - Rooms list, Appendix B - Contract Data Requirement List, Appendix C - General Info and Performance requirement, Appendix D - Hardware Support Services info and Appendix E - Room drawings • Pricing to be inserted at Annex D •	D - 1	I - 1	1	Each	\$ XXXXXXXXXXXXX	2019-03-29	

TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION	3
1.1 SECURITY REQUIREMENTS	3
1.2 STATEMENT OF WORK/REQUIREMENT	3
1.3 DEBRIEFINGS	3
1.4 TRADE AGREEMENTS	3
PART 2 - BIDDER INSTRUCTIONS	4
2.1 STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS	4
2.2 SUBMISSION OF BIDS	6
2.3 ENQUIRIES - BID SOLICITATION	6
2.4 APPLICABLE LAWS	6
2.5 MANDATORY SITE VISIT	7
PART 3 - BID PREPARATION INSTRUCTIONS	8
3.1 BID PREPARATION INSTRUCTIONS	8
PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION	11
4.1 EVALUATION PROCEDURES	11
4.2 BASIS OF SELECTION	11
PART 5 - CERTIFICATIONS AND ADDITIONAL INFORMATION	12
5.1 CERTIFICATIONS REQUIRED WITH THE BID	12
5.2 CERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION	12
PART 6 - RESULTING CONTRACT CLAUSES	14
6.1 SECURITY REQUIREMENTS	14
6.2 STATEMENT OF WORK/REQUIREMENT	14
6.3 STANDARD CLAUSES AND CONDITIONS	14
6.4 TERM OF CONTRACT	15
6.5 AUTHORITIES	15
6.6 PAYMENT	17
6.7 INVOICING INSTRUCTIONS	17
6.8 CERTIFICATIONS AND ADDITIONAL INFORMATION	18
6.9 APPLICABLE LAWS	18
6.10 PRIORITY OF DOCUMENTS	18
6.11 SACC MANUAL CLAUSES (DELIVERY)	18
6.11.1 SHIPPING INSTRUCTIONS - DELIVERY AT DESTINATION	18
6.11.2 SHIPPING - SCHEDULING	18

Solicitation No. - N° de l'invitation
40021-181639/A
Client Ref. No. - N° de réf. du client
40021-181639

Amd. No. - N° de la modif.
File No. - N° du dossier
hn331.40021-181639

Buyer ID - Id de l'acheteur
hn331
CCC No./N° CCC - FMS No./N° VME

Attachments:

Annex A - SOW
Annex B - Audio system Specification for Installation
Annex C - Milestone Payments
Annex D - Price List

Appendix A - Rooms list – all equipment required per room
Appendix B - Contract Data Requirement List
Appendix C - General Info and Performance requirement
Appendix D - Hardware Support Services info
Appendix E - Room drawings for 344 Slater

PART 1 - GENERAL INFORMATION

1.1 Security Requirements

There is no security requirement associated with the requirement.

Contractor personnel **MAY NOT ENTER NOR PERFORM WORK ON** sites where **PROTECTED or CLASSIFIED** information or assets are kept, without an escort provided by the department or agency for which the work is being performed.

1.2 Statement of Work/Requirement

The contractor must provide the goods and services in accordance with the technical requirements stated herein.

1.2.1 Delivery Requirement

Delivery and installation of a fully functional AV system is requested to be completed by March 29, 2019.

The Contractor will deliver all equipment by March 29, 2019, and install in all rooms at time of delivery with the possible exception of the 3rd floor, where construction is ongoing and the floor may not be complete and ready for installation by the requested delivery date.

If construction of the 3rd floor is not complete in time for installation to be completed by March 29, 2019, then the Contractor will agree to an installation date discussed with the TA, once construction is complete.

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

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

The 2003 standard instructions is amended as follows:

- Section 5, entitled Submission of bids, is amended as follows:
 - Subsection 1 is deleted entirely and replaced with the following: "Canada requires that each bid, at solicitation closing date and time or upon request from the Contracting Authority, for example in the case of epost Connect service, be signed by the Bidder or by an authorized representative of the Bidder. If a bid is submitted by a joint venture, it must be in accordance with the section entitled Joint venture."
 - subsection 2.d is deleted entirely and replaced with the following: "send its bid only to the specified Bid Receiving Unit of Public Works and Government Services Canada (PWGSC) identified in the bid solicitation, or to the address specified in the bid solicitation, as applicable;"
 - subsection 2.e is deleted entirely and replaced with the following: "ensure that the Bidder's name, return address and procurement business number, bid solicitation number, and solicitation closing date and time are clearly visible on the bid; and,"
- Section 6, entitled Late bids, is deleted entirely and replaced with the following: "PWGSC will return bids delivered after the stipulated solicitation closing date and time, unless they qualify as a delayed bid as described in the section entitled Delayed bids. For bids submitted using means other than the Canada Post Corporation's epost Connect service, the bid will be returned. For bids submitted using Canada Post Corporation's epost Connect service, conversations initiated by the Bid Receiving Unit via the epost Connect service that contain access, records and information pertaining to a late bid will be deleted."
- Section 07, entitled Delayed bids, is amended as follows:
 - Subsection 1 is amended to add the following piece of evidence: "d. a CPC epost Connect service date and time record indicated in the epost Connect conversation activity."
- Section 8, entitled Transmission by facsimile, is deleted and replaced by the following:

"Transmission by facsimile or by epost Connect

 1. Facsimile
 - a. Unless specified otherwise in the bid solicitation, bids may be submitted by facsimile. The only acceptable facsimile number for responses to bid solicitations issued by PWGSC headquarters is 819-997-9776 or, if applicable, the facsimile number identified in the bid solicitation. The facsimile number for responses to bid solicitations issued by PWGSC regional offices is identified in the bid solicitation.

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- b. For bids transmitted by facsimile, Canada will not be responsible for any failure attributable to the transmission or receipt of the faxed bid including, but not limited to, the following:
- i. receipt of garbled or incomplete bid;
 - ii. availability or condition of the receiving facsimile equipment;
 - iii. incompatibility between the sending and receiving equipment;
 - iv. delay in transmission or receipt of the bid;
 - v. failure of the Bidder to properly identify the bid;
 - vi. illegibility of the bid; or
 - vii. security of bid data.
- c. A bid transmitted by facsimile constitutes the formal bid of the Bidder and must be submitted in accordance with the section entitled Submission of bids.
2. ePost Connect
- a. Unless specified otherwise in the bid solicitation, bids may be submitted by using the [epost Connect service provided by Canada Post Corporation](https://www.canadapost.ca/web/en/products/details.page?article=epost_connect_send_a) (https://www.canadapost.ca/web/en/products/details.page?article=epost_connect_send_a).
- b. To submit a bid using epost Connect service, the Bidder must either:
- i. send directly its bid only to the specified PWGSC Bid Receiving Unit, using its own licensing agreement for epost Connect provided by Canada Post Corporation; or
 - ii. send as early as possible, and in any case, at least six business days prior to the solicitation closing date and time, an email that includes the bid solicitation number to the specified PWGSC Bid Receiving Unit requesting to open an epost Connect conversation. Requests to open an epost Connect conversation received after that time may not be answered.
- c. If the Bidder is sending an email to the Bid Receiving Unit, the Bid Receiving Unit will then initiate an epost Connect conversation which will allow the Bidder to transmit its bid afterward at any time prior to the solicitation closing date and time. The epost Connect conversation will create an email notification from Canada Post Corporation prompting the Bidder to access the message within the conversation, and the Bidder can reply to the email notification by transmitting its bid.
- d. If the Bidder is using its own licensing agreement to send its bid, the Bidder must keep the epost Connect conversation open until at least 30 business days after solicitation closing date and time.
- e. The email address of PWGSC Bid Receiving Unit in Headquarters is: TPSGC.DGAreceptiondessoumissions-ABBidReceiving.PWGSC@tpsgc-pwgsc.gc.ca. The solicitation number must be identified in the epost Connect message field of all electronic transfers.
- f. It should be noted that the use of epost Connect service requires a Canadian mailing address. Should a bidder not have a Canadian address, they may use the Bid Receiving Unit address specified on page 1 of the solicitation in order to register for the epost Connect service.
- g. For bids transmitted by epost Connect service, Canada will not be responsible for any failure attributable to the transmission or receipt of the bid including, but not limited to, the following:
- i. receipt of a garbled or incomplete bid;
 - ii. availability or condition of the epost Connect service;
 - iii. incompatibility between the sending and receiving equipment;
 - iv. delay in transmission or receipt of the bid;
 - v. failure of the Bidder to properly identify the bid;
 - vi. illegibility of the bid;
 - vii. security of bid data; or
 - viii. inability to create an electronic conversation through the epost Connect service.

- h. A bid transmitted by epost Connect service constitutes the formal bid of the Bidder and must be submitted in accordance with the section entitled Submission of bids."

2.1.1 SACC Manual Clauses

SACC Reference	Section	Date
<u>A9033T</u>	Financial Capability	2012-07-16
<u>B1000T</u>	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.

PWGSC Bids Receiving Unit
11 Laurier Street, Place du Portage, Phase 3, Core 0B2,
Gatineau, Québec, K1A 0S5
Tel.: 819-420-7201 Fax: 819-997-9776

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) 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:

December 14, 2018 at 10 AM

Location: 344 Slater Street, Main Lobby

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: louie.turner@pwgsc-tpsgc.gc.ca.

The site visit request must be submitted no later than December 13, 2018, 10:00 am

Bidders **must** clearly identify the name of the participant(s), the name of the company they represent, telephone 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.

This site is still considered a construction zone, all bidders participating in the site visit December 14, 2018 at 10 AM will need to bring and wear the following PPE:

CSA Approved Steel Toed, Steel Shank Safety Boots,
Approved Construction hard hat,
Safety Glasses

If the participants do not have the required PPE they will not be allowed on site.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

If the Bidder chooses to submit its bid electronically, Canada requests that the Bidder submits its bid in accordance with section 8 of the 2003 standard instructions and as amended in Part 2 - Bidder Instructions, Article 2.1 Standard Instructions, Clauses and Conditions. Bidders are required to provide their bid in a single transmission. The epost Connect service has the capacity to receive multiple documents, up to 1GB per individual attachment.

The bid must be gathered per section and separated as follows:

Section I: Technical Bid
Section II: Financial Bid
Section III: Certifications

If the Bidder chooses to submit its bid using another acceptable delivery method, Canada requests that the Bidder submits its bid in separate sections as follows:

- Section I: Technical Bid (3 soft copies on a medium CD, DVD or USB key)
- Section II: Financial Bid (1 soft copy on a medium CD, DVD or USB key)
- Section III: Certifications (1 soft copy on a medium CD, DVD or USB key)

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 soft copy of their bid:

- (a) use a numbering system that corresponds to the bid solicitation.

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.

The Contractor must provide all system engineering and design necessary to develop the complete systems described herein. Engineering and design must include preparation of all electronic schematics, hardware drawings, systems diagrams, schedules and lists as per Contract Data Requirements List (CDRL). These documents must be provided in soft copy (E-post, CD, DVD or USB key) at the time of bid.

3.1.1 Equivalent Product

1. Products that are equivalent in form, fit, function and quality to the item(s) specified in the bid solicitation will be considered where the Bidder designates the brand name and model and/or part number (and NCAGE if applicable) of the substitute product;
2. Products offered as equivalent in form, fit, function and quality will not be considered if:
 - (a) the bid fails to provide all the information requested to allow the Contracting Authority to fully evaluate the equivalency of each substitute product; or
 - (b) the substitute product fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item.

3. In conducting its evaluation of the bids, Canada may, but will have no obligation to, request bidders offering a substitute product to provide technical information demonstrating the equivalency (e.g. Drawing, specifications, engineering reports and/or test reports), or to demonstrate that the substitute product is equivalent to the item specified in the bid solicitation, at the sole cost of bidders, within three (3) business days of the request. If the bidder fails to provide the requested information within the specified timeframe, Canada may declare the bid non-responsive.

3.1.2 Equivalent Products - Samples

If the Bidder offers an equivalent product, Canada reserves the right to request a sample from the Bidder in order to determine its equivalency in form, fit, function, quality and performance to the item specified in the bid solicitation.

The Bidder must, upon request from the Contracting Authority, provide a sample to the Technical Authority, transportation charges prepaid, and without charge to Canada, within ten (10) calendar days from the date of request. The sample submitted by the Bidder will remain the property of Canada and will not be considered as part of the deliverables in any resulting contract. If the sample does not meet the requirements of the bid solicitation or the Bidder fails to comply with the request of the Contracting Authority, the bid will be declared non-responsive.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment.

3.2.1 Electronic Payment of Invoices – Bid

If you are willing to accept payment of invoices by Electronic Payment Instruments, identify which ones are accepted.

- ☐ 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)

If none are chosen, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.2.2 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 and additional information required under Part 5.

Solicitation No. - N° de l'invitation
40021-181639/A
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Buyer ID - Id de l'acheteur
hn331
CCC No./N° CCC - FMS No./N° VME

3.3.1 Delivery Offered

While delivery of the fully functional AV system is requested as indicated above, the best delivery that could be offered is_____.

3.3.2 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: _____
Facsimile: _____
Email: _____

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.

The technical bid must substantiate compliance with Annexes A and B and Appendixes A, B, C, D and E. Bids that propose a solution that does not comply with the technical requirements in this RFP will be non-response.

4.1.1.1 Mandatory Technical Criteria

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

- Technical compliance herein.

4.1.2 Financial Evaluation

The following Mandatory factors will be taken into consideration in the evaluation of each offer:

- Compliance with Pricing Basis.

The Offer price will be determined by processing items at Annex D as follows:

- a. Sum of all items total price (lot/yearly price x qty.) (Financial evaluation will include all option quantities)

4.1.2.1 Pricing Basis

The bidder must quote firm lot and yearly prices in Canadian dollars, DDP Delivered Duty Paid (344 Slater Street, Ottawa), 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. Unless specified otherwise, 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](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) 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) (<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" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

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" list at the time of contract award.

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 There is no security requirement applicable to the Contract.

Contractor personnel **MAY NOT ENTER NOR PERFORM WORK ON** sites where **PROTECTED or CLASSIFIED** information or assets are kept, without an escort provided by the department or agency for which the work is being performed.

6.2 Statement of Work/Requirement

The contractor must provide the goods and services in accordance with the technical requirements stated herein.

6.2.1 Optional Services

The Contractor grants to Canada the irrevocable option to acquire the services described at Annex D Pricing and Appendix D Hardware Maintenance Services of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, in whole or in part, through a contract amendment.

The Contracting Authority may exercise the options at any time before the expiry of the Contract by sending a written notice to the Contractor.

6.2.2 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.

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.

6.3.1.1 Warranty Period

Upon completion of the standard one year warranty period, the warranty may be extended by 4 x 1 year option Hardware Maintenance Service coverage periods. The warranty is to be included as described in Appendix D in addition to the Hardware Maintenance Service period and included in the price sheet in Annex D.

6.4 Term of Contract

6.4.1 Delivery Date

All the deliverables of a fully functional AV system must be completed on or before _____ (Delivery as offered and as accepted will be inserted at contract award).

6.4.2 Option to Extend the Contract

The Contractor grants to Canada the irrevocable option to extend the term of the Contract by up to 4 additional 1 year periods under the same conditions. The Contractor agrees that, during the extended period of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

Canada may exercise this option at any time by sending a written notice to the Contractor at any time before the expiry of the Contract. The option may only be exercised by the Contracting Authority, and will be evidenced for administrative purposes only, through a contract amendment.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Louie Turner, Supply Specialist

Public Works and Government Services Canada - Acquisitions Branch

Logistics, Electrical, Fuel and Transportation Directorate - "HN" Division

7B3, Place du Portage, Phase III, 11 Laurier Street, Gatineau, QC, K1A 0S5

Telephone: (613) 297-3769

E-mail address: louie.turner@pwgsc-tpsgc.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: _____

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.

6.5.3 Technical Authority

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

Name:

Title:

Telephone: (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 Procurement authority

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

Name:

Title:

Telephone: (xxx) xxx-xxxx

E-mail:

The Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the Procurement Authority however the Procurement Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

6.5.5 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: _____

Facsimile: _____

Email: _____

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/lot prices as specified in the contract at Annex D 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

SACC Manual clause [C6000C](#) (2017-08-17) Limitation of Price

6.6.3 Milestone Payments – Not subject to holdback

1. Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract at Annex C and the payment provisions of the Contract, up to 100 percent of the amount claimed and approved by Canada if:
 - a. an accurate and complete invoice for payment required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
 - b. the total amount for all milestone payments paid by Canada does not exceed 100 percent of the total amount to be paid under the Contract;
 - c. all work associated with the milestone and as applicable any deliverable required have been completed and accepted by Canada.

6.6.4 Insurance

SACC Manual clause [G1005C](#) (2016-01-28) Insurance

6.6.5 Electronic Payment of Invoices – Contract

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

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

6.8 Certifications and Additional Information

6.8.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

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) Annex A, Statement of Work/Requirement;
- (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) 344 Slater Street, Ottawa, Ontario Incoterms 2000 for shipments from a commercial contractor.

6.11.2 Shipping – Scheduling

The Contractor must deliver the goods to 344 Slater Street and all aspects of the contract must be co-ordinated with (name to be inserted at contract award)

ANNEX A

Statement of Work

Audio Visual Installation

Administrative Tribunals Support Service of Canada

344 Slater St.

Ottawa, Ontario

Definitions

1. Within the context of this specification, the following definitions must apply:
 - a. "Project": Refers to the Audio Video installation located at 344 Slater Street, floors 3, 4 and 15.
 - b. The term "Furnish" means design, supply, deliver, store, protect, and demonstrate to the Technical Authority (TA) as specified in this document.
 - c. The term "Install" means implement, label, terminate, test, commission, and demonstrate to the TA as specified in this document.
 - d. The term "Provide" means to Furnish and Install.
 - e. The term "Government Furnished Equipment" or "GFE" refer to equipment provided by the Technical Authority (TA) to the Contractor to install and integrate.
 - f. "Client": Refers to the ATSSC, Administrative Tribunals Support Service of Canada.
 - g. "CA": Refers to Contracting Authority
 - h. "TA": Refers to Technical Authority.

INTRODUCTION

2. Background. The Client is moving into a newly renovated space located on the 3rd, 4th and 15th floors of 344 Slater Street, Ottawa, Ontario. As part of this move, there is a requirement to deliver multiple audio video systems for the space.
3. Scope. The work includes: equipment, engineering, design, project management, fabrication, assembly, software programming, installation, commissioning and documentation and warranty of the audiovisual systems.
4. Requirement. The Client has a requirement to outfit several meeting rooms and spaces with audio video systems.

UNDERSTANDING AND INSTRUCTIONS

5. The contractor must provide local presentation as detailed below:
 - a. 3 Small Meeting rooms (Type 1);
 - b. 2 Small Meeting rooms (Type 2);
 - c. 2 Medium Meeting rooms – Split (Type 3);
 - d. 3 Medium Meeting rooms (Type 4);
 - e. 1 Large Meeting Room (Type 5);
 - f. 3 Telecom Rooms (Type 6)
 - g. 1 Kitchen/café/ Collaboration area (Type 7).

6. The Contractor must provide all system engineering and design necessary to develop the complete systems described herein. Engineering and design must include preparation of all electronic schematics, hardware drawings, systems diagrams, schedules and lists as per CDRL 6. These documents must be provided in both hard copy (paper) and soft copy (USB drive). Data file formats must be in PDF and AutoCAD Version 2015.
7. The Contractor must provide all necessary project management and supervisory personnel required to assure the accurate, professional and timely implementation of the project.
8. The Contractor must procure and assemble all hardware and equipment and any additional materials, as required, to produce completely functioning systems. The Project Authority will provide the required Wireless Video adapters. The contractor must integrate these units into the system and coordinate with the TA or Departmental Representative to test the system.
9. The Contractor must install all equipment, cables, wiring, connectors, plates and other material at the Project location and provide fully functioning audio video systems.
10. The Contractor must test its installation work with the Client's PCs, laptops or tablets. The Contractor must coordinate this activity with the Client and must be completed prior to final acceptance testing.
11. The Contractor must follow all installation and performance requirements as outlined in Appendix C.
12. Before acceptance tests are scheduled, the Contractor must perform its own system checkout. The Contractor must furnish all required test equipment and must perform all work necessary to determine and/or modify performance of the system to meet the requirements of the statement of work. When these initial tests and adjustments are completed, the Contractor must notify the Project Authority that the systems are in compliance with the specifications and are ready and complete for acceptance tests.
13. The Contractor must provide technical training to user and technician as outlined in CDRL 4.
14. The Contractor must provide warranty coverage and support services and must include the following:
 - a. Basic Warranty: Shall warrant the audiovisual systems to be free from faults and defects in system design and workmanship. Basic Warranty coverage shall include all custom designed equipment and the overall audiovisual system design and installation. Basic Warranty shall be effective for a period of one (1) year from the date of audiovisual system acceptance by the Client. Within the period of Basic Warranty coverage, individual manufacturers' equipment warranties shall apply to all purchased equipment. In the event

that the manufacturer's warranty has expired on a failed device (equipment warranty of less than one year), the AVC shall be responsible for the actual cost of any required repairs. All manufacturers' equipment warranties shall be effective as of the date of acceptance test completion. If equipment modification by the AVC voids the manufacturers' warranty, the AVC shall assume the equivalent equipment warranty. Response time for Warranty service work shall be no longer than the next business day from date of request for service. The AVC shall warrant that all equipment, materials and components will be new. No used or reconditioned equipment will be acceptable.

15. The Contractor must provide pricing for Hardware Maintenance Services and as outlined in Appendix D in one-year increments for a period of 5 years starting once all equipment installed.
16. The Contractor must obtain any permits required for the installation of the audio-visual system.
17. The Contractor must respect all deadlines of the AV project schedule. The Contractor must provide a schedule that aligns with the overall project schedule.
18. The Contractor must coordinate all deliveries with the GC or Building Management.
19. Contractors must make arrangements for hording on-site with the Client. Coordinate secure storage onsite with the Technical Authority.
20. The Contractor must update and deliver to the Project Authority the Weekly Checklist below. The report is due every Tuesday by noon for the duration of the contract via email (email address to be provided at contract award).

Weekly Checklist			
	Report Items	Date Completed	Comments
1	Contract awarded		
2	Contract received		
3	Contractor site review completed		
4	Identification of all critical dimensions		
5	Detailed AV project schedule		
6	Detailed Acceptance Test		
7	Provide preliminary screen shots of the touch panel layout depicting "Look and Feel"		

8	Weekly progress summary		
9	Schedule percentage complete		
10	Identified schedule pressures		
11	Installation complete		
12	Acceptance testing complete		
13	Documentation delivered		
14	Training		
15	Final deliverables received (CDRL)		
17	Project sign off		

21. The Contractor must ensure supplied equipment can be transported from the loading area, to the installation area. Access to the elevator must be coordinated with the GC or Building Management.
22. The Contractor must protect the structures and furniture within the building contracted work area.
23. The security of any equipment and/or tools provided by the Contractor for the purpose of installing this system remains the responsibility of the Contractor.
24. Five (5) days prior to the commencement of on-site work, the Contractor must have completed the following items:
 - a. a review of all relevant project documentation, including HVAC requirements, electrical power and grounding/earth connection;
 - b. a visit to the project site to ensure familiarity with physical conditions of the project affecting the work conditions; and
 - c. a finalized detailed project schedule to the Project Authority.
25. At project completion, the Contractor must deliver the following items:
 - a. System Operating Handbook describing the basic operation of the AV system by end users and technical support staff. This document must be graphical and written in non-technical terminology for ease of use. It must include a principle of operation for all components of the system. Should the project be broken up into milestones, i.e. delivery of a floor, then a draft of the handbook must be produce to allow users that move in to trained;

-
- b. Manufacturers Operating/User Manuals for each piece of equipment installed; and
 - c. Complete system design documentation including electronic schematics, hardware drawings, system diagrams schedules and lists for approval by the Project Authority as specified in CDRL 6.

ANNEX B

AUDIOVISUAL SYSTEM SPECIFICATIONS

FOR

AUDIO VISUAL INSTALLATION OF

ADMINISTRATIVE TRIBUNALS SUPPORT SERVICE OF CANADA

344 SLATER STREET

OTTAWA, ONTARIO

Table of Contents

CODES AND STANDARDS	3
SYSTEMS DESCRIPTION	3
TYPE 1 – SMALL MEETING ROOM (ATSSC)	3
TYPE 2 – SMALL MEETING ROOM (NON-ATSSC)	4
TYPE 3 – MEDIUM MEETING ROOM - SPLIT	4
TYPE 4 – MEDIUM MEETING ROOM	5
TYPE 5 – LARGE MEETING ROOM	5
TYPE 6 – TELECOM ROOM	6
TYPE 7 – KITCHEN / COLLABORATION AREA	6
SUBCONTRACTOR IDENTIFICATION	10
SIGN-OFF/CLOSE-OUT	10

CODES AND STANDARDS

1. If, in the opinion of the Contractor, an installation practice is required which is contrary to the specifications or drawings, such installation must not commence until a written request for change has been made to the Technical Authority and the request has received approval. The Technical Authority is to respond to this request within two (2) business days.
2. If an item of recommended equipment, condition or installation practice as specified does not meet governing code requirements, the Contractor must bring such conflict to the attention of the Technical Authority and must facilitate resolution of conflict with all parties concerned.

SYSTEMS DESCRIPTION

3. The Contractor must provide the fully integrated Audio Video systems as detailed below. Refer to Appendix A for Room List and the AV drawings accompanying this AV Specification for connection details. The Contractor must propose equipment that meets the capabilities and features of the components listed in Appendix A. All sources are HDMI unless otherwise noted. Adapter dongles may be used to accommodate connectivity. EDID for all displays must be set to 1980X1080p as a default resolution.
4. The complete system solutions detailed within this AV Specification are configured with professional commercial hardware. Should the Contractor consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, the Contractor is invited to make suggestions / substitutions, in writing, to the Contracting Authority named in the bid solicitation. The Contractor must clearly outline the suggested improvement as well as the reasons for the suggestion. The Contractor must provide manufacturers specification sheets specifically highlighting the areas where the suggestion meets or exceeds that outlined in the bid solicitation. The Client will have the right to accept or reject any or all suggestions. Refer to equipment list in Appendix A – Room List for details.
5. Each room system must, as a minimum, have the capabilities and features listed below:

Type 1 – Small Meeting Room (ATSSC)

- a. Small meeting room to seat 5-6 people at a table. Table must have one (1) table access enclosure with connections as outlined in the supplied drawings.
- b. Video: One (1) display on the wall must be connected via video matrix located in the telecom room. Video input connections must include wireless presentation unit (Clickshare) and connections in the table access enclosure. All connection outlined in the supplied drawings. Provide adapter ring complete with connectors outlined in Room list (Appendix A).
- c. Audio: Embedded audio from HDMI or wireless presentation system to be outputted to display speakers. Audio teleconferencing shall be via table top unit provided by the client.

- d. Control: Control must be achieved through 7" touch panel on table top connected to a centralized processor controlling all equipment in room.
- e. Functionality: Type 1 rooms will have one (1) functions: local presentation to a display.

Type 2 – Small Meeting Room (Non-ATSSC)

- a. Small meeting room to seat 5-6 people at a table. Table must have one (1) table access enclosure with connections as outlined in the supplied drawings.
- b. One (1) display on the wall must be connected via video matrix located in the telecom room. Video input connections must include wireless presentation unit (Clickshare) and connections in the table access enclosure. All connection outlined in the supplied drawings. Provide adapter ring complete with connectors outlined in Room list (Appendix A).
- c. Audio: Embedded audio from HDMI or wireless presentation system to be outputted to display speakers. Audio teleconferencing shall be via table top unit provided by the client.
- d. Control: Control must be achieved through 7" touch panel on table top connected to a centralized processor controlling all equipment in room.
- e. Functionality: Type 1 rooms will have one (1) functions: local presentation to a display.

Type 3 – Medium Meeting Room - Split

- a. Medium meeting room to seat 12-16 people at a table or room can be split down the middle by a dividing partition to create two small rooms. Room shall have 2 floor boxes to accommodate both configurations. There must be two (2) table access enclosures with connections as outlined in the supplied drawings.
- b. Video: One (1) projection screen/projector and two (2) displays must be connected via video matrix located in the telecom room. Video input connections must include wireless presentation units (Clickshare) and connections in the table access enclosure. All connection outlined in the supplied drawings. Provide adapter rings complete with connectors outlined in Room list (Appendix A).
- c. Audio: Audio from ceiling mic array must be connected to DSP in telecom room. Mics must be available to the teleconference systems. Video matrix must break out audio from video inputs and output it to the DSP.
- d. Control: Control must be achieved through 10" touch panels on table tops connected to a centralized processor controlling all equipment in room. Control must be able to accommodate both room configurations, split and joined.
- e. Functionality: Type 3 rooms will have two (2) functions: local presentation to a display and audio teleconferencing.

Type 4 – Medium Meeting Room

- a. Medium meeting room to seat 12-16 people at a table. Table must have one (1) table access enclosure with connections as outlined in the supplied drawings.
- b. Video: One (1) display on the wall must be connected via video matrix located in the telecom room. Video input connections must include video conferencing camera, wireless presentation units (Clickshare) and connections in the table access enclosure. All connection outlined in the supplied drawings. Provide adapter rings complete with connectors outlined in Room list (Appendix A).
- c. Audio: Audio from ceiling mic array must be connected to DSP in telecom room. Mics must be available to the teleconference and video conference systems. Video matrix must break out audio from video inputs and output it to the DSP.
- d. Control: Control must be achieved through 10" touch panel on table top connected to a centralized processor controlling all equipment in room.
- e. Functionality: Type 4 room will have three (3) functions: local presentation to a display, video conferencing and teleconferencing.

Type 5 – Large Meeting Room

- a. Large meeting room to seat 16-20 people at a table or room can be split down the middle by a dividing partition to create two medium rooms. Room shall have 2 floor boxes to accommodate both configurations. There must be two (2) table access enclosures with connections as outlined in the supplied drawings.
- b. Video: One (1) projection screen/projector and two (2) displays must be connected via video matrix located in the telecom room. Video input connections must include wireless presentation units (Clickshare) and connections in the table access enclosure. All connection outlined in the supplied drawings. Provide adapter rings complete with connectors outlined in Room list (Appendix A).
- c. Audio: Audio from ceiling mic arrays must be connected to DSP in telecom room. Mics must be available to the teleconference systems. Video matrix must break out audio from video inputs and output it to the DSP.
- d. Control: Control must be achieved through 10" touch panels on table tops connected to a centralized processor controlling all equipment in room. Control must be able to accommodate both room configurations, split and joined.
- e. Functionality: Type 5 rooms will three (3) functions: local presentation to a display, video conferencing and teleconferencing.

Type 6 – Telecom Room






- a. Telecom room houses combined IT and AV equipment. AV contractor to coordinate the installation of AV equipment rack with Technical Authority as other governmental departments shall be installing racks and equipment in these rooms.

Type 7 – Kitchen / Collaboration area













- a. Open seating area that can double as informal meeting space.
- b. Video: One (1) display mounted on a wall with connection to a wireless presentation system. Video input connections must include one (1) wireless presentation unit (Clickshare).
- c. Audio: Embedded audio from wireless presentation system to be outputted to internal display speakers.
- d. Control: Control shall be via display handheld remote.
- e. Functionality: Type 7 room will have one (1) function: local presentation to a display.

MULTI-TRADE RESPONSIBILITY CHART













The following scope allocation is to establish commonly miscommunicated responsibilities creating dual ownership and/or non-ownership. Its intent is to properly direct the Contractor during the RFP process and subsequent pricing. It is not intended to detail all contractor or subcontractor responsibilities under the GC or Client.

Task		Contractor	Client	Need by Date	Task done
General Construction					
1	Ensure Client security requirements are met				
	Site acceptance, unloading and delivery				
3	Provide a secure and dust free holding area				
	Furnish and install AC power receptacles				
5	Field confirmation of AC power receptacles				
	Furnish and install- AV junction boxes, conduit, raceways and rough-in items				
7	Field confirmation of AV junction boxes, conduit, raceways and rough-in items				
	Provide all secondary pathways and J-hooks for AV related cabling.				
9	Furnish and install AV related plates				
	Furnish and install All AV related blocking and infrastructure support requirements (ex Projectors, LCD, etc)				
10	Furnish low voltage				

11	AV cables and connectors	
12	Field confirmation of all Cat6 cabling	

	needed by AV systems		
	Install AV cable pulls, terminations, labeling		
13	and tests cables.		
	Furnish and install motorized front projection screens, low voltage interfaces and wall		
14	switches		
	Provide final position		
15	of work area displays		
	Furnish and install LCD screens, mounts, low voltage interfaces and wall		
17	switches.		
	Furnish and Install projector mounts, LVC's and wall		
18	switches		
	Install ceiling speakers, backboxes, tile bridges, transformers and		
19	grilles		
	Provide lighting systems & associated low voltage interfaces		
20			
	Furnish and install		
21	ceiling hatches		
	Lighting and dimmer		
22	pre-sets and control		
	Rubbish removal related to AV		
23	installation daily		
	Furnish and install lecterns and lectern		
24	microphones		
	Cut-outs templates		
25	for table hatches		

	Furnish and install AV cables and components in table	
26	hatches	

	Provide any table modifications to		
27	support microphones		
	Furnish Digital Set-		
28	top boxes		
	Integrate Digital Set-		
29	top boxes into AV system		
	Furnish and install data cabling drops (pertaining to AV		
30	equipment)		
	Provide data drop connectivity (pertaining to AV		
31	equipment)		
	Provide static IP Addresses (pertaining		
32	to AV equipment)		
	Integration of data lines into VTC		
33	equipment		
	Confirm all AV Voice/Data/Power (by others) have been included in base		
34	contract		
	Furnish and configure AV related dedicated computers and all		
35	related peripherals		
	Integrate AV related dedicated computers and all related		
36	peripherals.		
	Provide all AV equipment as per RFP to supply a turn-key		
37	system		
	Testing, commissioning, training and closeout		
38	documentation		

SUBCONTRACTOR IDENTIFICATION

1. Please specify the following for all subcontracted entities (if applicable):
 - a. Contact Name;
 - b. Company Name;
 - c. Address;
 - d. City, Province;
 - e. Phone Number;
 - f. Fax Number; and
 - g. Email address.

SIGN-OFF/CLOSE-OUT

1. A mandatory on-site meeting consisting of the Contractor's project team (Project manager, lead tech and programmer) and the Technical Authority must be scheduled at the projects conclusion to review and resolve all outstanding issues. The goal is to address any and all programming issues, confirm functionality and sign-off.
2. Two (2) USB drive must be provided as specified in the Appendix B CDRL:
 - a. Manufacturer Operating Manuals;
 - b. System Operating Handbook and Quick Reference Guides (cheat sheets);
 - c. Equipment inventory;
 - d. Acceptance test results;
 - e. Latest DSP program source code required for a full functional re-install; and
 - f. As-Built drawings;

ANNEX C

Milestone Payment Schedule

1	Delivery of Equipment	3 rd Floor	1	lot		
2	Installation and commissioning	3 rd Floor	1	lot		
3	Delivery of Equipment	4 th floor	1	lot		
4	Installation and commissioning	4 th Floor	1	lot		
5	Delivery of Equipment	15 th Floor	1	lot		
6	Installation and commissioning	15 th Floor	1	lot		
7	service	Year one - applicable additional Hardware maintenance services as per Appendix D in addition to the standard one year warranty period, exact dates TBD	1	year		
8	Service	Option Year one Hardware maintenance services as per Appendix D, exact dates TBD	1	year		
9	Service	Option Year two Hardware maintenance services as per Appendix D, exact dates TBD	1	year		
10	Service	Option Year three Hardware maintenance services as per Appendix D, exact dates TBD	1	year		
11	Service	Option Year four Hardware maintenance services as per Appendix D, exact dates TBD	1	year		

Payment to be made upon completion of lines 1 to 6.

Payment for line 7 to be made upon Commissioning of fully functional AV systems. If third floor is delayed, payment will be made but coverage would still be for a full year upon commissioning of the floor.

Payment for lines 8 to 11 will be N/30 from start date of each year.

ANNEX D - Price Sheet

Item	Make	Description	Qty	UoM	Price		
1	Equipment	3 rd Floor	1	lot			
2	Installation	3 rd Floor	1	lot			
3	Equipment	4 th floor	1	lot			
4	Installation	4 th Floor	1	lot			
5	Equipment	15 th Floor	1	lot			
6	Installation	15 th Floor	1	lot			
7	service	Year one - applicable additional Hardware maintenance services as per Appendix D in addition to the standard one year warranty period, exact dates TBD	1	year			
8	Service	Option Year one Hardware maintenance services as per Appendix D, exact dates TBD	1	year			
9	Service	Option Year two Hardware maintenance services as per Appendix D, exact dates TBD	1	year			
10	Service	Option Year three Hardware maintenance services as per Appendix D, exact dates TBD	1	year			
11	Service	Option Year four Hardware maintenance services as per Appendix D, exact dates TBD	1	year			

Notes:

3rd floor consists of Rooms: 330, 331, 336, 337, Kitchen/Collaboration Area, 3rd floor Telecom Room (TR)

4rd floor consists of rooms: 414, 441, 4th floor Telecom Room (TR)

15rd floor consists of rooms: 1505, 1511, 1522, 1527, 1538, 15th floor Telecom Room (TR)

Solicitation No. - N° de l'invitation
40021-181639
Client Ref. No. - N° de réf. du client
40021-181639

Amd. No. - N° de la modif.
File No. - N° du dossier
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Equipment pricing is for price of all equipment required per floor. Installation pricing is to include all costs associated with the installation of the fully functional AV systems per floor as described in all Annex's and Appendices other than the items listed in the Annex D price sheet, which must be priced as noted.

APPENDIX A
Room List

2018-11-05

The following is a detailed description of the rooms by room type. All equipment listed is based on an indicative design. All equipment and part numbers are indicated to convey design intent. All components listed below are minimum acceptable equipment. The Contractor may offer other equipment equivalent to or greater than the list below. The Contractor must provide all miscellaneous cables and small parts that are not listed to provide a complete turnkey system.

1. Type 1 – Small Meeting Rooms (ATSSC)

ATSSC				
Small Mtg Rms - (ATSSC) #'s: 1505,1522,1527				
Issued for Review				
Item	Description	Manufacturer	Model	Qty
1	Display Devices (and related accessories)			
2	55" Interactive Display c/w built in PC	Microsoft Surface Hub		1 per room
3	Display mount	Microsoft		1 per room
4				
5	Video Devices (and related accessories)			
6	Video Transmitter units (Tx) (for clickshare)	Crestron	DM-TX-4K-100-C-1G-B-T	1 per room
7	Video Receiver Unit (Rx) (display)	Crestron	DM-RMC-4K-SCALER-C	1 per room
8	Video Transmitter units (Tx) (under table)	Crestron	DM-TX-4K-302-C	1 per room
9	Wireless presentation unit	Clickshare	CS-100	1 per room
10	Audio Devices (and related accessories)			
11				
12				
13	Control Devices (and related accessories)			
14	Touch panel	Crestron	TSW-760-NC-B-S	1 per room
15	Touch panel table top kit	Crestron	TSW-760-TTK-B-S	1 per room
16				
17	Miscellaneous (and related accessories)			
18	Table access box (Cable Cubby)	Extron CC1200	70-1037-02	1 per room
19	AC + USB outlets	Extron	60-1697-01	1 per room
20	RJ-45 connection plate (2 port punchdown)	Extron	70-491-16	1 per room
21	2 Cable pass-through	Extron	70-636-02	2 per room
22	Adapter ring (HDMI -HDMI Micro, DP-HDMI, Lighting-HDMI)	Liberty		1 per room
23	All cables and misc small parts not listed above for a complete and functional turn-key system			1 per room
24	Documentation (Cut Sheets, Owner's Manual, Control System Manual)			1 per room

2. Type 2 – Small Meeting Room (Non-ATSSC)

ATSSC				
Small Mtg Rms (Non-ATSSC) #'s: 331, 414				
Issued for Review				
Item	Description	Manufacturer	Model	Qty
1	Display Devices (and related accessories)			
2	60" Interactive Display	Sharp	PNC 605B	1 per room
3	Display mount	Peerless	ST680	1 per room
4				
5	Video Devices (and related accessories)			
6	Video Transmitter units (Tx) (for clickshare)	Crestron	DM-TX-4K-100-C-1G-B-T	1 per room
7	Video Receiver Unit (Rx) (display)	Crestron	DM-RMC-4K-SCALER-C	1 per room
8	Video Transmitter units (Tx) (under table)	Crestron	DM-TX-4K-302-C	1 per room
9	Wireless presentation unit	Clickshare	CS-100	1 per room
11	Audio Devices (and related accessories)			
12				
13				
14	Control Devices (and related accessories)			
15	Touch panel	Crestron	TSW-760-NC-B-S	1 per room
16	Touch panel table top kit	Crestron	TSW-760-TTK-B-S	1 per room
17				
18	Miscellaneous (and related accessories)			
19	Table access box (Cable Cubby)	Extron CC1200	70-1037-02	1 per room
20	AC + USB outlets	Extron	60-1697-01	1 per room
21	RJ-45 connection plate (2 port punchdown)	Extron	70-491-16	1 per room
22	2 Cable pass-through	Extron	70-636-02	2 per room
23	USB Extender	Crestron	USB-EXT-2	1 per room
24	Adapter ring (HDMI -HDMI Micro, DP-HDMI, Lighting-HDMI)	Liberty		1 per room
25	All cables and misc small parts not listed above for a complete and functional turn-key system			1 per room
26	Documentation (Cut Sheets, Owner's Manual, Control System Manual)			1 per room

3. Type 3 – Medium Meeting Room – Split (Non-ATSSC)

ATSSC

Medium Mtg Rms Split (Non-ATSSC) - #'s: 330, 441

Issued for Review

Item	Description	Manufacturer	Model	Qty
1	Display Devices (and related accessories)			
2	70" Interactive Display	Sharp	PNC705B	2 per room
3	Display mount (Side A)	Peerless	ST680 or equivalent	2 per room
4	Projector 5400 lumen, WUXGA	Panasonic	PT-RZ570W	1 per room
5	Ceiling mount for projector	Panasonic	ET-PKD120H or equivalent	1 per room
6	Projection screen 109" Diag, 16:10 aspect ratio	Da Lite	70105LS	1 per room
7				
8	Video Devices (and related accessories)			
9	Video Transmitter units (Tx) (for clickshare)	Crestron	DM-TX-4K-100-C-1G-B-T	2 per room
10	Video Receiver Unit (Rx) (display)	Crestron	DM-RMC-4K-SCALER-C	3 per room
11	Video Transmitter units (Tx) (under table)	Crestron	DM-TX-4K-302-C	2 per room
12	Wireless presentation unit	Clickshare	CS-100	2 per room
13				
14	Audio Devices (and related accessories)			
15	Amplifier	Extron MPA 601-70V	60-1449-01	2 per room
16	Speakers (sold in pairs) (2 sets on each side)	Extron SM26	60-1308-02	4 per room
17	Ceiling array microphone	Shure	MXA910	2 per room
18				
19	Control Devices (and related accessories)			
20	Touch panel	Crestron	TSW-1060-NC-B-S	2 per room
21	Touch panel table top kit	Crestron	TSW-1060-TTK-B-S	2 per room
22				
23	Miscellaneous (and related accessories)			
24	Table access box (Cable Cubby)	Extron CC1200	70-1037-02	2 per room
25	AC + USB outlets	Extron	60-1697-01	2 per room
26	RJ-45 connection plate (2 port punchdown)	Extron	70-491-16	2 per room
27	2 Cable pass-through	Extron	70-636-02	4 per room
28	Adapter ring (HDMI -HDMI Micro, DP-HDMI, Lighting-HDMI)	Liberty		2 per room
29	USB Extender	Crestron	USB-EXT-2	1 per room
30	All cables and misc small parts not listed above for a complete and functional turn-key system			1 per room
31	Documentation (Cut Sheets, Owner's Manual, Control System Manual)			1 per room

4. Type 4 – Medium Meeting Room

ATSSC				
Medium Mtg Rms - #'s: 336, 1511, 1538				
Issued for Review				
Item	Description	Manufacturer	Model	Qty
1	Display Devices (and related accessories)			
2	84" Interactive Display c/w built in PC	Microsoft Surface Hub		1 per room
3	Display mount	Microsoft		1 per room
4				
5	Video Devices (and related accessories)			
6	Video Transmitter units (Tx) (for clickshare and VC camera)	Crestron	DM-TX-4K-100-C-1G-B-T	2 per room
7	Video Receiver Unit (Rx) (display)	Crestron	DM-RMC-4K-SCALER-C	1 per room
8	Video Transmitter units (Tx) (under table)	Crestron	DM-TX-4K-302-C	1 per room
9	Wireless presentation unit	Clickshare	CS-100	1 per room
10	Video Conferencing w/ 12x camera	Polycam	Group 700	1 per room
11	Audio Devices (and related accessories)			
12	Amplifier	Extron MPA 601-70V	60-1449-01	1 per room
13	Speakers (sold in pairs) (2 sets on each side)	Extron SM26	60-1308-02	2 per room
14	Table array microphone	Shure	MXA310	1 per room
15				
16				
17	Control Devices (and related accessories)			
18	Touch panel	Crestron	TSW-1060-NC-B-S	1 per room
19	Touch panel table top kit	Crestron	TSW-1060-TTK-B-S	1 per room
20	Miscellaneous (and related accessories)			
21	Table access box (Cable Cubby)	Extron CC1200	70-1037-02	1 per room
22	AC + USB outlets	Extron	60-1697-01	1 per room
23	RJ-45 connection plate (2 port punchdown)	Extron	70-491-16	1 per room
24	2 Cable pass-through	Extron	70-636-02	2 per room
25	Adapter ring (HDMI -HDMI Micro, DP-HDMI, Lighting-HDMI)	Liberty		1 per room
26	All cables and misc small parts not listed above for a complete and functional turn-key system			1 per room
27	Documentation (Cut Sheets, Owner's Manual, Control System Manual)			1 per room

5. Type 5 – Large Meeting Room

ATSSC				
Large Mtg Rm - 337				
Issued for Review				
Item	Description	Manufacturer	Model	Qty
1	Display Devices (and related accessories)			
2	70" Interactive Display	Sharp	PNC705B	2
3	Display mount (Side A)	Peerless	ST680 or equivalent	2
4	Projector 5400 lumen, WUXGA	Panasonic	PT-RZ570W	1
5	Ceiling mount for projector	Panasonic	ET-PKD120H or equivalent	1
6	Projection screen 109" Diag, 16:10 aspect ratio	Da Lite	70105LS	1
7				
8	Video Devices (and related accessories)			
9	Video Transmitter units (Tx) (for clickshare)	Crestron	DM-TX-4K-100-C-1G-B-T	2
10	Video Receiver Unit (Rx) (display)	Crestron	DM-RMC-4K-SCALER-C	3
11	Video Transmitter units (Tx) (under table)	Crestron	DM-TX-4K-302-C	2
12	Wireless presentation unit	Clickshare	CS-100	2
13	Video Transmitter units (Tx) (for cameras)	Crestron	DM-TX-4K-100-C-1G-B-T	3
14	Video Conferencing w/ 12x camera	Polycorn	Group 700	2
15	extra VC Camera (12x)	Polycorn		1
16	Audio Devices (and related accessories)			
17	Amplifier	Extron MPA 601-70V	60-1449-01	2
18	Speakers (sold in pairs) (2 sets on each side)	Extron SM26	60-1308-02	4
19	Ceiling array microphone	Shure	MXA910	2
20				
21	Control Devices (and related accessories)			
22	Touch panel	Crestron	TSW-1060-NC-B-S	2
23	Touch panel table top kit	Crestron	TSW-1060-TTK-B-S	2
24	Miscellaneous (and related accessories)			
25	Table access box (Cable Cubby)	Extron CC1200	70-1037-02	2
26	AC + USB outlets	Extron	60-1697-01	2
27	RJ-45 connection plate (2 port punchdown)	Extron	70-491-16	2
28	2 Cable pass-through	Extron	70-636-02	4
29	VC Camera mount (Thin Profile Wall Mount)	Vaddio	535-2000-241	1
30	USB Extender	Crestron	USB-EXT-2	1
31	Adapter ring (HDMI -HDMI Micro, DP-HDMI, Lighting-HDMI)	Liberty		2
32	All cables and misc small parts not listed above for a complete and functional turn-key system			
33	Documentation (Cut Sheets, Owner's Manual, Control System Manual)			

6. Type 6 – Telecom Room 3rd Floor

ATSSC				
3rd Floor TR				
Issued for Review				
Item	Description	Manufacturer	Model	Qty
1	Display Devices (and related accessories)			
2				
3				
4	Video Devices (and related accessories)			
5	16x16 Video Switch	Crestron DM	DM-MD16X16	2
6	DM Input cards	Crestron DM	DMC-4K-C-HDCP2	16
7	DM Output cards	Crestron DM	DMC-4K-CO-HD-HDCP2	5
8	HDMI Input cards	Crestron DM	DMC_4K-HD-HDCP2	2
9	HDMI output cards	Crestron DM	DMC-4k-HDO	1
10				
11	Audio Devices (and related accessories)			
12	Audio DSP	Biamp Tesira Server I/O		1
13	Dante Card		DAN-1	1
14	POTS card (Telephone)		STC-2	2
15	Analog Input Card		SEC-4	1
16	Analog Output Card		SOC-4	2
17				
18	Control Devices (and related accessories)			
19	Control Processor	Crestron DM	CPN3	1
20				
21	Miscellaneous (and related accessories)			
22	Middle Atlantic 4 post rack c/w lacing bars, vertical power bar (L5-20)			1
23	24 PORT PoE network switch	Cisco	SG350-28MP	1
24				
25				
26	All cables and misc small parts not listed above for a complete and functional turn-key system			1
27	Documentation (Cut Sheets, Owner's Manual, Control System Manual)			1

7. Type 6 – Telecom Room 4th Floor (Non-ATSSC)

ATSSC non				
4th Floor TR (Non-ATSSC)				
Issued for Review				
Item	Description	Manufacturer	Model	Qty
1	Display Devices (and related accessories)			
2				
3				
4	Video Devices (and related accessories)			
5	16x16 Video Switch	Crestron DM	DM-MD16X16	1
6	DM Input cards	Crestron DM	DMC-4K-C-HDCP2	6
7	DM Output cards	Crestron DM	DMC-4K-CO-HD-HDCP2	2
8	HDMI Input cards	Crestron DM	DMC_4K-HD-HDCP2	0
9	HDMI output cards	Crestron DM	DMC-4k-HDO	0
10				
11	Audio Devices (and related accessories)			
12	Audio DSP	Biamp Tesira Server I/O		1
13	Dante Card		DAN-1	1
14	POTS card (Telephone)		STC-2	1
15	Analog Input Card		SEC-4	0
16	Analog Output Card		SOC-4	1
17				
18	Control Devices (and related accessories)			
19	Control Processor	Crestron DM	CPN3	1
20				
21	Miscellaneous (and related accessories)			
22	Middle Atlantic 4 post rack c/w lacing bars, vertical power bar (L5-20)			1
23	24 PORT PoE network switch	Cisco	SG350-28MP	1
24				
25				
26	All cables and misc small parts not listed above for a complete and functional turn-key system			
27	Documentation (Cut Sheets, Owner's Manual, Control System Manual)			

8. Type 6 – Telecom Room 15th Floor

ATSSC				
15th Floor TR				
Issued for Review				
Item	Description	Manufacturer	Model	Qty
1	Display Devices (and related accessories)			
2				
3				
4	Video Devices (and related accessories)			
5	16x16 Video Switch	Crestron DM	DM-MD16X16	1
6	DM Input cards	Crestron DM	DMC-4K-C-HDCP2	12
7	DM Output cards	Crestron DM	DMC-4K-CO-HD-HDCP2	3
8	HDMI Input cards	Crestron DM	DMC_4K-HD-HDCP2	6
9	HDMI output cards	Crestron DM	DMC-4k-HDO	2
10				
11	Audio Devices (and related accessories)			
12	Audio DSP	Biamp Tesira Server I/O		1
13	Dante Card		DAN-1	1
14	POTS card (Telephone)		STC-2	2
15	Analog Input Card		SEC-4	1
16	Analog Output Card		SOC-4	1
17				
18	Control Devices (and related accessories)			
19	Control Processor	Crestron DM	CPN3	1
20				
21	Miscellaneous (and related accessories)			
22	Middle Atlantic 4 post rack c/w lacing bars, vertical power bar (L5-20)			1
23	24 PORT PoE network switch	Cisco	SG350-28MP	1
24				
25				
26	All cables and misc small parts not listed above for a complete and functional turn-key system			
27	Documentation (Cut Sheets, Owner's Manual, Control System Manual)			

9. Type 7 – Kitchen / Collaboration Area

ATSSC non				
Kitchen / Collab space				
Issued for Review				
Item	Description	Manufacturer	Model	Qty
1	Display Devices (and related accessories)			
2	60" Display	Sharp	PNLE601	1
3	Display mount	Peerless	ST680	1
4				
5	Video Devices (and related accessories)			
6	Wireless presentation unit	Clickshare	CS-100	1
7				
8	Audio Devices (and related accessories)			
9				
10				
11	Control Devices (and related accessories)			
12				
13				
14	Miscellaneous (and related accessories)			
15				
16				
17	All cables and misc small parts not listed above for a complete and functional turn-key system			1
18	Documentation (Cut Sheets, Owner's Manual, Control System Manual)			1

APPENDIX B

Contract Data Requirements List (CDRL)

Contract Data Requirements List

Appendix B

CONTRACT DATA REQUIREMENTS LIST

ITEM No.	TITLE/SOW PARA	QTY	DELIVER TO	DUE DATE	REMARKS
01	Acceptance Test Plan	1	Technical Authority	Acceptance plan due 5 days prior to room testing and acceptance	Electronic copy
02	Acceptance Tests	3	Technical Authority	Acceptance test results due 5 days following sign-off from the Technical Authority	Hardcopies (qty 2) and electronic copy
03	System Operating Materials	1 per type of room	Technical Authority	Draft materials due 20 days prior to room testing and acceptance. Final materials due 30 days following room testing and acceptance	Hardcopies (qty 2) and electronic copy
04	Training	6 hours	Technical Authority	4 hour end user training 2 hours technical training	
05	Manufacturer Data Sheets/User Manuals	1	Technical Authority	Data Sheets and User Manuals due 5 days following sign-off from Project Authority	Hardcopy and/or electronic copy
06	As-Built Drawings / Equipment Inventory	1 set per type of room	Technical Authority	Draft drawings and inventory due 5 days prior to room testing and acceptance. As-Built drawings and inventory due 20 days following room testing and acceptance	Hardcopies (qty 2) and electronic copy
07	Programming Source and DSP Code	1 set per room (as applicable)	Technical Authority	Due 20 days following room testing and acceptance	Electronic copies

DATA ITEM DESCRIPTION	
TITLE: Acceptance Testing SUBTITLE: Acceptance Test Plan Hardware and System	

DESCRIPTION/PURPOSE

1. The Acceptance Test Plan must include the procedures on how to perform the tests that will be used by the Contractor to demonstrate the complete integration and proper operation of the hardware and system software. It will describe the general procedures terms and conditions governing the planning, preparation and completion of acceptance tests covering the system submitted for acceptance.
2. The Contractor must submit an outline of a sample acceptance test plan with the bid. Outline must contain sufficient detail to understand sequence and timing.

PREPARATION OF THE ACCEPTANCE TEST PLAN

3. The Contractor must prepare and submit an Acceptance Test Plan. It must include step-by-step procedures on how each test will be performed. The tests procedures must be in a table format. The table must contain columns for the following information:
 - a. System/sub-system name scope of the test;
 - b. Control parameters;
 - c. Test equipment provided by Contractor to perform the test(s);
 - d. Results: Pass/Fail; and
 - e. Spaces/columns at each test for Contractor and Project Authority signatures.
4. Test Parameters – The Contractor must perform end-to-end testing of all signal flows to verify proper functionality. The testing must adhere to the suggested manufacturer testing protocol.
5. Cable Testing – All Contractor-fabricated cables must be tested and results submitted to the Project Authority:
 - a. Continuity tests;
 - b. Short tests; and
 - c. Wiremap tests.
6. The audiovisual system must be tested in accordance to the InfoComm International Standard for Audiovisual Systems performance verification (ANSI/INFOCOMM 10:2013).
 - a. As part of ANSI/INFOCOMM 10:2013, the functional categories to be tested must include the following:
 - (1) Audio System Performance;
 - (2) Video System Performance;
 - (3) Audio/Video System Performance:

- (4) Cable Management, Termination and Labeling:
- (5) Control System Performance;
- (6) System and record Documentation:
- (7) Electrical:
- (8) Information Technology;
- (9) Operations and Support;
- (10) Physical Environment;
- (11) Physical Installation; and
- (12) Serviceability.

DATA ITEM DESCRIPTION	
TITLE: Documentation SUBTITLE: System Operating Materials	

DESCRIPTION/PURPOSE

1. The purpose of the System Operating Materials is to show the users how to set-up, use and operate the presentation and audio conferencing systems as well as basic troubleshooting procedures.

PREPARATION OF SYSTEM OPERATING MATERIALS

2. The Contractor must submit to the Project Authority for his review and approval a manual titled System Operating Materials. These materials must contain the required information for a novice user to set-up the presentation or make an audio call. Use of block diagrams, laminated "cheat sheets" and cross-references to the Manufacturer Operating Manuals shall be included in the technical section of the materials. One copy of the quick reference guides "cheat sheets" (final version) must be left in each room. One copy, in handbook form, must be delivered to the Project Authority.

3. As a minimum, the handbook must include the following information:

- a. Overview of the local presentation, audio conferencing, video conferencing and annotating components;
- b. How to set-up, adjust and use all the features of all the components procured or installed;
- c. Pictorial representation of the steps needed to start, connect and present using the different equipment installed within each room. Written verbiage to accompany each step in the process.
- d. The technical section of the System Operating Materials must contain:
 - I. A complete list of all the settings for the equipment used, including a snap shot or screen capture of each configuration page.
 - II. A troubleshooting guide section that contains sufficient information to allow a technician to pinpoint which equipment has failed in case of problems, and to ensure that the problem is not due to a bad set up or connection;
 - III. It shall also include directions on how to bypass the video and audio switching equipment in case of failure to allow the conference or local presentation to be conducted by manually switching the audio and video sources;
 - IV. Provide a description of each module used in the local presentation installation, unless this information is contained somewhere else in the off-the-shelf documentation. In this case, it must provide a reference to this information;
- e. If necessary, the Materials must make reference to sections of the documentation contained in the Off-the-Shelf Equipment Operating Manuals.

4. The System Operating Materials must be prepared in English and French.

5. The System Operating Materials must also be provided on USB media, in Microsoft Word format, version 2010 or later to the Departmental Representative.

Note: The technical section of the System Operating Materials must be included with the As-Built/Installed Drawings.

DATA ITEM DESCRIPTION	
TITLE: Training SUBTITLE: Training Syllabus	

DESCRIPTION/PURPOSE

1. To provide detailed training sessions to end users and technical staff.

PREPARATION OF TRAINING SYLLABUS

The Contractor must provide on-site training to end users and technical staff instructing them on the AV systems capabilities, maintenance and troubleshooting. Specific structure and scheduling of training must be established in cooperation with Project Authority prior to the completion of the installation. The Contractor must provide a total of 4 hours of end user training and 2 hours of technical training. The Project Authority will create the training schedule and allocate the number of training hours based on the room complexity.

As the rooms can accommodate a large number of end users and technical staff, the number of participants attending the training session will be limited. The technical authority shall provide a list of participants. End User training shall consist of "Train the Trainer" type format.

1. The training syllabus must be centered on content of the System Operating Handbook and must cover system set-up, functions, operations, and instructions on how to operate the software allowing interactive whiteboarding.
2. The training must teach end users with no previous experience:
 - a. How to set-up and display a local presentation;
 - b. How to set-up a teleconference call;
 - c. How to set-up a video conference call; and
 - d. How to set-up, adjust and use all of the system features.
3. In addition to the end user syllabus, the technical staff training must cover:
 - a. Determine which equipment has failed and determine the cause of the problem;
 - b. Steps to bypass the video and audio switching equipment; and
 - c. Review the as-built drawings including schematics, rack layouts and floor plans.
4. Training must take place at the Project location using the equipment as a training aid.
5. Training must be available in English or French. Coordinate with Technical Authority.

DATA ITEM DESCRIPTION	
TITLE: Drawing SUBTITLE: As-Built Drawings and Equipment Inventory	

DESCRIPTION/PURPOSE

1. The as-built drawings must indicate the location of all major components of each system and how these components are interconnected.

PREPARATION OF AS-BUILT DRAWINGS AND EQUIPMENT INVENTORY

As-Built Drawings

2. The Contractor must supply drawings pertinent to those components, systems, and work supplied under the contract.
3. The as-built drawings must include a schematic comprising of video, audio and control interconnectivity, rack layout and floor plan of each room.
4. The as-built drawings must be submitted to the Project Authority for his review and approval no later than 15 days after site testing and acceptance.
5. Two (2) copies of all as-built drawings must be delivered to the Project Authority.
6. An electronic version of all as-built drawings must be provided to the Project Authority on a USB drive (AutoCAD 2015 and PDF).

Equipment Inventory

7. The Contractor must provide a spreadsheet itemizing the make, model number, serial number, location, and warranty information of all installed equipment.
8. The spreadsheet must be provided to the Project Authority on a USB drive (Microsoft Excel 2010).

APPENDIX C

GENERAL INSTALLATION AND PERFORMANCE REQUIREMENTS

Table of Contents

GENERAL INSTALLATION	3
INSTALLATION	3
CONTRACTOR PERFORMANCE	3
EQUIPMENT RACKS	4
CABLE DRESS	5
CABLE TYPES	6
POWER CORDS	6
CABLE TERMINATION	6
CABLE AND CONDUCTOR PREPERATION	8
CONNECTORS	8
SOLDER CONNECTIONS	9
INSULATION DISPLACEMENT CONNECTIONS	9
CRIMP CONNECTIONS	10
SCREW CONNECTIONS	10
GROUNDING PRACTICES	10
MATERIALS	11
GENERAL PERFORMANCE REQUIREMENTS	12
STANDARDS	12
MAINTAINABILITY	12
SAFETY	12
EQUIPMENT MODIFICATIONS	12
EQUIPMENT SUBSTITUTIONS	12
CUSTOM / MODIFIED EQUIPMENT	13
SYSTEM SOFTWARE AND SOFTWARE PROGRAMMING	13

GENERAL INSTALLATION

INSTALLATION

1. Installation must include the following:
 - a. Uncrating, setting in place, fastening to walls, floors, ceilings, counters, or other structures where required of all equipment except as otherwise noted;
 - b. Interconnect wiring of the components of the system;
 - c. Equipment alignment and adjustment; and
 - d. All other work whether or not expressly required herein which is necessary to result in a completely tested and operating system.
2. All equipment must be firmly secured in place unless requirements of portability dictate otherwise. Fastenings and supports must be adequate to support their loads with a safety factor of at least three (3) times.
3. All boxes, equipment, etc. must be plumb and square.

CONTRACTOR PERFORMANCE

4. All assembly and material cutting must be limited to a working area specifically designated for this purpose.
5. Cable and wire stripping scrap and conductor strands must be kept away from sensitive electronic equipment such that loose pieces do not become lodged inside equipment.
6. All racks, consoles, connection boxes and other equipment enclosures must be degreased and vacuum cleaned prior to installation of equipment or panels.
7. The Contractor must take measures to protect all cabinets, casework, finished flooring, wall coverings, equipment, etc. from damage resulting from its work. This must include, but not limited to, the installation of temporary protective coverings. Any such damage must be corrected by the Contractor at no additional cost to the Client.
8. All equipment racks and sub-assemblies must be substantially constructed at the Contractor's premises. This will include, but not be limited to, wiring, labeling, dressing, supports, and ventilation.
9. All spaces must be cleaned as an ongoing activity. The Contractor must vacuum clean all work areas and remove all debris, scrap and waste at least daily and after any substantial debris accumulation. At the conclusion of the work in a given room area, a final vacuum cleaning of all such access spaces must be performed. All loose items, including those which were existing at the start of the project must be removed. Wet mopping must be performed on flooring only when other dry cleaning methods are insufficient. No brushing or wet cleaning of equipment must be permitted.
10. The Contractor must generate any additional drawings or information required for fabrication, installation and wiring of the system.

11. The Contractor must be responsible for the proper alignment, adjustment and calibration of all audiovisual equipment and must provide all personnel and test equipment for the system test and adjust.
12. The Contractor must be responsible for verifying the compatibility of all equipment and related hardware with related work performed by others. This includes, but is not limited to, electrical, mechanical, structural, and all finish work.
13. The Contractor must furnish all software necessary to operate software controlled audiovisual equipment or sub-systems (e.g. remote control system, audio DSP). Whether produced by the Contractor or supplied by a software manufacturer, all software will be installed and tested prior to the delivery of equipment to the site.

EQUIPMENT RACKS

14. The Contractor must use equipment racks of required height to mount all necessary equipment.
15. Equipment mounting must conform to the industry standards of 1-3/4" rack units.
16. The Contractor must only use rack rails that are tapped for #10-32 screws (no clip nuts shall be used). A #10-32 x 3/4" inch black truss head Philips rack screw with nylon washer must be utilized throughout the facility.
17. The Contractor must implement a general ventilation scheme for all racks in the systems.
18. All racks must be vacuumed and wiped clean prior to new equipment installation.
19. All racks must be inspected carefully prior to installation of equipment. All rough or sharp edges that may cause injury to personnel or damage equipment or cabling must be deburred or a permanent protective covering applied.
20. Provide blank rack panels in all rack openings not occupied by equipment. Blank filler panels must not exceed three rack units in size. Panel color must be matte black. Perforated panels may be used to aid in proper ventilation.
21. Allow sufficient space for installation of all owner furnished equipment such as PC's, etc.
22. Allow some space for future expansion where possible. All devices within equipment racks must be mounted to the equipment rack. No devices shall be resting atop (monitor excepted) or mounted to other devices within the equipment racks unless otherwise noted.
23. Devices will be mounted in the racks in logical order. Generally, signal flow should move from the top of the rack to bottom. Heavier devices should be mounted in the lower portion to ensure that the assembly is not too top heavy. Frequently used devices will be mounted at the optimal elevation for operator use.

24. Contractor rack logo panels shall not be accepted.

CABLE DRESS

25. In general, cable dressing must be considered from a maintenance standpoint. Suitable service loops must be provided to allow removal of equipment, or to extend equipment that is mounted in the rack on rack slides. Where there is no rear access to the rack mounted equipment, this requirement must be carefully addressed, and cabling must be of sufficient length to enable the removal and replacement of any individual piece of equipment with all others in place.
26. It is expected that the Contractor will fabricate some portions of the system off-site. Pre-wiring is acceptable provided that the pre-wired assembly can easily be transported to its final location without complication, and without risk of cable or equipment damage.
27. The Contractor must be responsible for determining the proper length of all cables whether manufactured on or off the job site.
28. The Contractor must determine the desired method of securing cables. All of the following requirements must be met by the system:
- a. Velcro cable ties are the preferred method of cable lacing. Lay-in systems are not acceptable except as applied to a horizontal cable tray;
 - b. Wires and cables must be installed in a neat and orderly fashion, with like cable types following similar paths. Groups of cables must be neatly combed and harnessed. Harnessed groups of cables must be anchored at suitable intervals to reduce and relieve wire strain, especially strain on connections. Adequate service loops must be provided at all cable endpoints;
 - c. Some rack-mounted equipment utilizes slide assemblies for front extension while in operation. For this type of mounting, additional, carefully dressed service loops on all cables must be provided and installed with spring operated cable retractor assemblies to gather and recoil the service loop;
 - d. For all schemes of cable routing, no point in the path shall be subjected to a bend radius of less than eight (8) times the cable diameter, or minimum cable bend radius specified by the manufacturer;
 - e. Captive cables must not be laced in such a manner as to prevent removal of the equipment to which they are captive;
 - f. Wires and cables must be segregated according to signal type. In addition, audio cable must be subdivided into three (3) classes: microphone level circuits, line level circuits, and speaker level circuits;
 - g. Microphone level audio circuits must be kept at least three inches (3") from any other type of parallel signal circuits and at least six inches (6") from any parallel AC power circuits;
 - h. Speaker level audio circuits must be kept a minimum of three inches (3") from line level audio and AC power circuits. All other signal circuits must be kept at least three inches (3") away from any parallel AC power circuits;
 - i. Where circuits of different types must cross, they must do so at right angles and then return to the above required separations in as short a distance as possible;
 - j. Conductors, wires, and cables must be continuous between termination points. Splices are not acceptable; and

- k. Rack mounting rails must not be used for cable lacing. Lacing bars and/or tie mount bases mounted to cabinets or console must be provided where appropriate.

CABLE TYPES

- 29. All cables installed must meet appropriate governing codes and standards.
- 30. The Contractor is encouraged to suggest alternate cable types where a significant cost savings may be realized without any loss of quality, reliability and performance. Alternates must be approved by the Departmental Representative prior to use.
- 31. The Contractor must determine building and other regulating authority requirements for cables installed as part of the AV scope of the Project. This requirement applies to cables in return air plenums as well as other areas. If the cable type indicated does not comply with these requirements, the Contractor shall propose alternate cable types, and/or encasement in complying raceways or conduits. All cabling not in conduit must be plenum-rated.

POWER CORDS

- 32. All equipment power cords must terminate in a standard plug that must be wired in compliance with governing codes and standards.
- 33. The power cord connector type at the equipment must be provided by the manufacturer. Custom field terminated power connectors must not be ordered. If the manufacturer provides a choice, a removable power cord that attaches to the equipment with an IEC 320/CEE 22 connector is preferred. The use of factory manufactured custom length cables are acceptable.
- 34. The power cord may be laced to the rack as long as the cord is removable at the power connector on the piece of equipment. This is to allow removal of the equipment without undoing the cable lacing. Power cords must not be laced in the same bundle with signal or control cables. If the power cord is an active component of the equipment, the cable must be dressed separately from all other cables terminating at the equipment to facilitate easy removal of the equipment. All power cords must be plugged into an AC power distribution strip which will be pre-wired into the rack prior to delivery to site.

CABLE TERMINATION

- 35. Wire and cable termination must be performed in accordance with industry standards and the guidelines of generally accepted installation practices.
- 36. With respect to audio equipment interconnects, the Contractor must make every effort to use equipment with balanced inputs and outputs. When this is not possible, such as the case to meet specification, the following are recommended (in order of preference):

- a. An electronic balancing device (professional interface) or balancing transformer should be utilized;
 - b. In the case of an unbalanced output driving a balanced input, forward referencing should be utilized; and
 - c. An active-balanced to unbalanced interconnect is not recommended.
 37. It is ultimately the Contractor's responsibility to choose the best wiring practices to achieve maximum sonic quality.
 38. Wire and cable termination must include all aspects of equipment connection, including, but not limited to, the following:
 - a. Wire and cable length;
 - b. Protective jacket removal;
 - c. Conductor separation, dressing and trimming;
 - d. Conductor stripping; and
 - e. Connector device installation including, but not limited to, the following:
 - i. Conductor termination;
 - ii. Shell assembly;
 - iii. Strain relief installation; and
 - iv. Locking/latching device installation.
 39. Cable designation installation on each distinct wire or cable, except where the color code or pair number of individuals of pairs of a multi-pair eliminates the need for this.
 - a. These must be installed within two inches of connectors, unless this interfered with disassembly of the connector.
 - b. These must be installed in such a manner as to be visible without unlacing any harnesses.
 40. Continuity affirmation.
 41. Mating of connecting devices to equipment.
 42. All cables and patch points on input panels shall be labelled to denote their source device or input panel location, cable number and destination device.
 - a. The cable shall be individually identified with a cable designator, which shall be clearly indicated on the engineering drawings;
 - b. Label both ends of each cable;
 - c. The label shall be a Panduit Self Laminating Ink Jet or Laser Labels (e.g. LJSL5-Y3-2.5 for small diameter cables and LJSL11-Y3-1 for larger diameter Video, VGA and RGBHV). Cables lettering shall be a minimum of 3/32 inch (2.5 mm) high and shall be black ink on a white background; and
 - d. Cable Numbering shall start with the Upper Case A for Audio Cables, C for Control Cables, N for Network Cable, P for Remote Power Cables and V for Video, S-Video, VGA or RGBHV. Cables followed by a three digit numeric designation (e.g. V015, C001, etc). Hand Lettered Labels or PAN Code tm Tape style markers will not be accepted.
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- 43. It is the responsibility of the Contractor to determine and affirm the type and extender of all required mating connectors. Since manufacturers of equipment may exercise their right to make changes in connector types and wiring, it must remain the responsibility of the Contractor to verify this aspect of the design prior to cable fabrication and installation.
- 44. Exposed portions of shield must be protected with PVC heat shrinkable sleeving. Exposed ends of outer jackets on shielded cables must be insulated with sleeves to eliminate the possibility of portions of the cut off foil shielded touching adjacent shields or metal. Either rubber "Kellerman" type sleeves or heat shrink sleeves must be used. Bare shield drain wires must be insulated with small diameter clear Teflon or PVC heat shrink (as appropriate) from under the sleeve to within 0.125 inch of the point of termination.
- 45. Conductors and/or cables interconnecting assemblies shall be formed into a bundled harness and dressed to preclude damage from adjacent surfaces and sharp edges,
- 46. Cabling required in pedestrian areas such as hallways, shall be contained in conduit and conform to the vertical and horizontal directions of the walls and ceilings;
- 47. Cable runs shall be continuous, without splices or adapters from terminal to terminal;
- 48. Primary power and electronic wiring shall not be co-located in conduit;
- 49. Marett type connectors are not permitted, nor is the use of nail rings or staples to secure cable harnesses to structures.

CABLE AND CONDUCTOR PREPERATION

- 50. All cables must be prepared in such a way that the individual conductors, shield or their insulation are not nicked or cut in any way. The cable outer jacket must be cut square.
- 51. Insulation must be removed from conductor in such a manner that conductor strands must be nicked to the extent that base metal shows through the plating and wire strands remain in the original lay, and are not combed out. The conductor's insulation must be cut square within $\frac{1}{4}$ " of the outer diameter of the insulated conductor. If required, the conductor must be tinned with a minimum amount of 60-40 or 63-37 solder (tin/lead with resin flux).

CONNECTORS

- 52. Only premium quality cable connectors shall be used. All cable mounted connectors must be covered by a metal shell connector hood or must have crimp ferrules which securely grasp the cable outer jacket to provide protection to the rear connections made on the connector and provide strain relief for the cable. All connectors must have incorporated a mechanical means of attaching the connector to its mate to assure that a connector will not fall off unless intentionally removed.
- 53. Audio Connector Requirements - Circular (XLR type): These must be premium quality connectors with tarnish resistant contact surfaces. No connection must be made to the shell unless specifically called out in the drawings.

54. Video Connector Requirements: Only connectors with tarnish resistant contact surfaces must be used. Kings TRS finish ("bright nickel") or equal is recommended. The CENTRE conductor pin and socket must be captive and finished with gold or silver surfaced over nickel. All connectors must be specified by the manufacturer as to be acceptable with the specific cable being used. Kings crimp BNC connectors or approved alternate must be used.
55. Panel Mounted Connectors: Care must be taken to insure that the sleeves of panel mount connectors to not make contact with the mounting panel.
 - a. Audio (microphone, line level): Locking XLR type;
 - b. Audio (speaker level): locking/latching "Speakon" type;
 - c. Audio (line level): ¼" diameter locking/latching, tip/ring/sleeve;
 - d. Video: HDMI or DVI type;
 - e. Serial Data: DB-9 or DB-25, metal shell; and
 - f. Video/Audio: Shielded Cat cable from Manufacturer of Video extenders (Tx / Rx).

SOLDER CONNECTIONS

56. Only the finest quality 60-40 or 63-37 solder (tin/lead) with rosin flux must be used. The solder must be as manufactured by Kester, Ersin, or approved alternate, and must be designed for electronic use. Solder fillets must wet and flow around conductor and terminal. In no case shall the general outline of the conductor be visible in excessive solder. The insulation must not be charred, melted or burned by the soldering operation. There must be no evidence of either lead or terminal contamination. The final solder joint must be bright and shiny and must show no evidence of being a "cold" joint.
57. Mechanical connections made to terminals prior to soldering must be the minimum required to reliably retain wire, usually a simple bend around solder eyelet or post. Avoid practice of multiple wraps on solder terminals, as that practice makes conductor removal very difficult after soldering.

INSULATION DISPLACEMENT CONNECTIONS

58. Insulation displacement connections such as ribbon cables and the telephone connector technology must only be installed with termination tooling as specified by the connector manufacturer. If shown in the connector manufacturer's data, the controlled-cycle crimp tool must be selected. If the manufacturer has a multi-conductor mass-termination tool available, this must be selected for all connectors of ten pins or more.
 59. Individual conductors of cables installed on terminal blocks must not be stripped, and must be punched down with a spring loaded impact tool designed for this specific purpose. Bare cable conductors must be insulated with Teflon, PVC heat shrink or other insulating sleeve (as appropriate) prior to being punched down on terminal block. During the punch down process, the free end of the conductor must be cut off, and the installer must ascertain that this cut off end is not left within the block or block assembly.
 60. Only cables designed specifically for insulation displacement termination with the specific termination device employed must be used.
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CRIMP CONNECTIONS

61. Where crimp connectors are utilized, they must be installed using the manufacturer recommended controlled cycle crimp tool that assures that the proper crimp pressure has been applied. The Contractor must develop a procedure to insure that the crimp tooling is properly checked for compliance with the manufacturer's standards, and that it is producing crimp-type connections within the required tolerances. The frequency of this depends on the usage and on the length of time a particular tool holds its calibration.
62. Only tooling recommended by the manufacturer must be used. Only pins and connectors of the proper size and design for the cable to which they are to be applied must be used. There must be no abnormal deformation of the contact during the crimping operation. There must be no damage to the contact during the crimping operation that could interfere with its retention in its shell or its mating. There must be no damage done to the conductor which either severs strands or exposes the individual strands base metal by the crimping operation.

SCREW CONNECTIONS

63. Only insulated crimp on spade terminals must be used for application to barrier strips. Multiple gang lugs or ring lugs are not acceptable for this purpose. This is only applicable to stranded conductor wires. It is suggested that stranded conductor wire be "double over" on the crimp end prior to crimping. Solid conductors may be attached directly to the barrier strip.
64. All conductors must be stripped prior to installation underneath screws on terminals. Unlike the stranded control cable, solid conductor wire does not require crimp lugs on individual conductors. All screw terminated solid connectors must be wrapped in the same direction as screw rotation during tightening.

GROUNDING PRACTICES

65. The audiovisual system will be serviced by the earthing conductor that is provided with the mains supply.
 - a. All devices in the audiovisual system racks will be serviced with a grounded AC outlet. Devices having two (2) prong power cords will also have a fourteen (14) gauge green copper wire connected from the chassis to the grounded copper buss bar mounted to the equipment rack frame. Under no circumstances will the prong of a three (3) prong power cord be removed;
 - b. Audio cables shield must be connected to ground at one point only. Exceptions may be made for phantom powered microphones and some ICM and IFB systems. This ground point must be at the system ground of the destination device, which must be strapped to the system ground in the rack. For intra-rack wiring this requires the shield to be connected at both ends, but grounded at only one end;
 - c. All video receptacles must be insulated from the mounting panel, outlet box, or wireway. Unless otherwise detailed, this must be accomplished by using insulated-from-panel type receptacles; and

- d. The Contractor should take care to consider ground references within each device and the grounding factors on site.

MATERIALS

- 66. General: Materials used in installations must be chosen with due consideration being given to the intended use, safety, durability, retention of appearance and avoidance of corrosion or other chemical effects.
- 67. Toxic Materials: Material capable of producing harmful toxic effects under operating conditions, equipment malfunction, or accidental other causes, must not be used.
- 68. Metals: Metals used must be corrosion-resistant or treated to resist corrosion in atmospheric conditions to which the installation will be subjected.
- 69. Plastics: Plastics must be durable and resistant to cracking, brittleness, discolouration, deformation or similar defects, upon ageing or when subjected to hot or cold thermal extremes.
- 70. Natural Rubber: The use of natural rubber is prohibited unless directly specified, or approved for its use is obtained from the Departmental Representative.

GENERAL PERFORMANCE REQUIREMENTS

STANDARDS

- 71. General Standards used in the design and installation of the audiovisual system must conform to the highest quality Broadcast Industry standards. The following list provides a general indication of the type of industry organizations with published technical standards, and is not intended to be all-inclusive.
 - a. AVIXA AudioVisual and Integrated Experience Association (Formally Infocomm)
 - b. AES Audio Engineering Society: Audio Standards
 - c. EIA Electronic Industry Association: Equipment mounting, construction, tooling
 - d. IEEE Institute of Electrical and Electronic Engineers: Electrical/ Signal Standards
 - e. CEC Canadian Electrical Code: Electrical Standards
 - f. NCAC National Council of Acoustical Consultants: Acoustic Standards
 - g. ASTM American Society for Testing and Materials: Test and materials Standards
 - h. BICSI Building Industry Consulting Service International
 - j. CSA Canadian Standards Association

MAINTAINABILITY

- 72. The Contractor must provide a fully functioning system that is easily accessible for service while the system is operational. Where this is not practical due to mutually accepted circumstances, service functions will be designed to allow a minimal amount of equipment and support disassembly. The audiovisual system design, construction and installation will allow components to be accessible for inspection, maintenance and repair with a minimal disassembly of other components or surrounding

equipment.

SAFETY

73. The audiovisual system will be inherently safe, when operated and maintained in compliance with the Contractor provided operations and maintenance / technical manuals. In addition, equipment will meet or exceed governing standards and requirements for safety. This must include provisions and installation of seismic bracing and restraints.

EQUIPMENT MODIFICATIONS

74. The audiovisual systems must be designed to utilize new “off the shelf” equipment. Every effort must be made to avoid the use of custom or modified equipment. However, some AV equipment may require modifications to accommodate installation, remote control or other integration requirements.
75. Where equipment must be modified to conform to system specifications and design parameters, the modifications made must in no way affect the performance of the equipment as published by the manufacturer. Equipment modifications may also be impacted by and must comply with the terms of other sections of this AV Specification.

EQUIPMENT SUBSTITUTIONS

76. Requests for use of alternate equipment to that recommended in the Equipment Specification will be considered on an item by item basis. Equipment substitutions will be considered in cases where a specific component of the system is no longer available, or where the alternate equipment is shown to provide equal or greater quality and performance.
77. All proposed equipment substitutions must be submitted to the Departmental Representative with the Contractor’s bid. Proposed substitution submittals must include full information, specifications, and data sheets for the proposed alternative equipment. All equipment must be new and must meet or exceed the last published specifications of the manufacturer in all respects.
78. Approval of equipment substitutions must not imply release of Contractor responsibility for meeting all requirements and design objectives as outlined in this AV Specification.

CUSTOM / MODIFIED EQUIPMENT

79. It must be the responsibility of the Contractor to provide all appropriate design, engineering and fabrication in the provision of specified custom or modified equipment.
80. All specified custom or modified equipment must be included in the scope of the Contractor’s work. No portion may be omitted from the scope of the Contractor’s work. Bids excluding any portion of the custom or modified equipment will be deemed non-responsive.
- a. Substitutions of “off the shelf” equipment for specified custom equipment will be considered when submitted per the procedures noted for Equipment Substitutions.

SYSTEM SOFTWARE AND SOFTWARE PROGRAMMING

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81. The Contractor must be responsible for providing a complete and working system in the provision of software programming.
 82. All software programming must be included in the scope of the Contractor's work. No portion may be omitted from the scope of the Contractor's work. Bids excluding any portion of the software programming will be deemed non-responsive.
 83. Contractor must supply system software as specified in the Assembly and Installation Requirements.
 84. The Contractor must supply a complete set of system software, software programming code and documentation as follows:
 - a) In the case of commercial software, a complete set of software including the license and documentation for all devices, utilities, and tools used in the operation and maintenance of the audiovisual system.
 - b) In the case of non-commercial or custom software, a complete set of software is required, including license (if applicable) and documentation for all devices, utilities, and tools used in the operation and maintenance of the audiovisual system. Documentation must be presented in such a way as to allow the Client the ability to perform unassisted operation, maintenance, trouble shooting and programming.
 - c) All commercial software provided by the Contractor as part of the Project must be procured and transferred in full compliance with the publisher's copyright, licensing and other requirements of ownership and use. All software license agreements must be registered in Client's name.
 - d) Client must retain full rights to all custom software, programming and software programming code developed by the Contractor as part of the project. This must include the right to use, reproduce and modify the software and software programming code as reasonably required to operate the audiovisual systems and to support their ongoing maintenance and development.
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APPENDIX D

HARDWARE MAINTENANCE SERVICES

1. Hardware Maintenance Service

1. In this Part, the "Hardware Maintenance Period" means:
 - a. for Hardware purchased under the Contract, the Hardware Warranty Period described in contract documents, plus any time by which the Hardware Maintenance Period is extended if the Contract includes an option for extending the Hardware Maintenance Service or the Contract is otherwise amended to extend the Hardware Maintenance Period;
2. The Contractor agrees to maintain the Hardware according to this Part to ensure that it remains capable of Fully Functional Operation throughout the Hardware Maintenance Period (the "Hardware Maintenance Service"). As part of the Hardware Maintenance Service, the Contractor agrees to diagnose and resolve all problems that occur in the Hardware by repairing, replacing or otherwise making good the part or parts of the Hardware that are defective or do not meet the Specifications as soon as possible. The Contractor agrees that a problem is not resolved until the Hardware is restored to Fully Functional Operation.
3. The cost of providing all labour, parts and other materials or travel required to restore the Hardware to Fully Functional Operation or perform any other part of the Hardware Maintenance Service described in this section is included in the Hardware Maintenance Service. No additional charges for time, material or other costs related to maintaining the Hardware can be made during the Hardware Maintenance Period.
4. The Contractor must accept and respond to Hardware Maintenance Service calls during the "Principal Period of Maintenance" (PPM). If the PPM is not defined elsewhere in the Contract, the PPM is twelve (12) hours each day, from 6 a.m. to 6 p.m., Eastern Time, Monday to Friday, not including statutory holidays observed by Canada.
5. As part of the Hardware Maintenance Service, the Contractor must provide Canada with technical support through a single toll-free hotline with service available in English and French, based on the caller's language preference, in accordance with the following:
 - a) The Contractor's hotline must be staffed by qualified personnel who are able to respond to user questions and, to the extent possible, resolve user problems and provide advice about problems relating to all the Hardware and the Hardware Documentation, as well as installation, configuration, integration and interconnection issues relating to the Hardware. For all user problems that cannot be resolved over the telephone, the Contractor must issue a trouble ticket for Hardware Maintenance Service, either for Return-to-Depot Maintenance Service or On-Site Maintenance Service described in section 2, as applicable.
 - b) The Contractor's hotline must be available, at a minimum, throughout the PPM.
 - c) The Contractor must provide its hotline telephone number to the Contracting Authority immediately after the Contract is awarded.
 - d) The Contractor must pick up all hotline calls within 5 rings 95 percent of the time. The Contractor must answer all calls, with a live service agent, within 2 minutes 95 percent of the time.

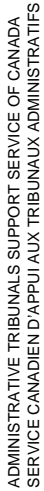
6. As part of the Hardware Maintenance Service, the Contractor must also provide Canada with technical support through a Web site support service, which must include, as a minimum, frequently asked questions and, if applicable, on-line software diagnostic routines, support tools, and services. The Contractor's Web site must provide support in English and in French. The Contractor's Web site must be available to Canada's users twenty-four (24) hours a day, 365 days a year, and must be available 99 percent of the time. The Contractor must provide its Web site address to the Contracting Authority immediately after the Contract is awarded.
7. Each time the Contractor provides Hardware Maintenance Service, except Hardware Maintenance Service under sections 5 or 6, the Contractor's service technician must prepare a Hardware Maintenance Service report. For any Hardware Maintenance Service provided on site, the Contractor must provide one copy of this report to the representative of Canada at the site when the work is completed. For any Hardware Maintenance Service performed off site, the Contractor must include a copy of this report with the Hardware when it is returned to Canada. The Contractor must keep copies of the reports for six (6) years from the date the Contract expires or is terminated and provide a copy of any Hardware Maintenance Service reports to the Contracting Authority on request. Each Hardware Maintenance Service report must include the following:
 - a. the date and time the Contractor received the maintenance call;
 - b. the service location that received or responded to the maintenance call;
 - c. the serial number for the item of Hardware;
 - d. the name of person who performed the maintenance;
 - e. if the maintenance is performed on site, the time the service technician arrived at the site, and all the time spent working at the site, including the number of hours and date for each day worked at the site;
 - f. a description of symptom;
 - g. the diagnosis of problem;
 - h. a list of all parts replaced or installed;
 - i. the identification number of each major assembly removed or exchanged, if any; and
 - j. If the maintenance was performed on site, both the name of the Contractor's service technician and the service location from which the representative works, as well as the name and signature of Canada's representative at the site who accepts that the Hardware appears to have been restored to Fully Functional Operation.

8. The Contractor guarantees that the parts required to perform the Hardware Maintenance Service will be available throughout the Hardware Maintenance Period.
9. Canada becomes the owner of any parts used to repair or maintain the Hardware (which themselves become part of the Hardware).
10. Canada acknowledges that, in performing the Hardware Maintenance Service, the Contractor and its employees, agents, and subcontractors may develop and share with Canada ideas, know-how, teaching techniques, and other intellectual property. Except as otherwise provided in the Contract, ownership of that intellectual property will belong to the Contractor. As long as the Contractor at all times observes the confidentiality provisions of the Contract, the Contractor will be entitled to use that intellectual property for whatever purposes it sees fit, including in the services it provides to its other customers, on the condition that Canada also has the right, without cost, to use that intellectual property for its own purposes.

2 Classes of Hardware Maintenance Service

1. This section describes two classes of Hardware Maintenance Service: "Return-to-Depot Maintenance Service" and "On-Site Maintenance Service". If the Contract specifies that more than one class of service applies, Canada may specify the class of service required for each item of Hardware, either in the Articles of Agreement or, if the Contract contemplates multiple orders for the purchase or lease of Hardware, in the individual order at the time the Hardware is purchased or leased. If the Contract does not specify the required class of service, the Contractor must provide Return-to-Depot Maintenance Service only.
2. For Return-to-Depot Maintenance Service, during the PPM throughout the Hardware Maintenance Period, the Contractor must pick up and return the Hardware to and from the location in Canada where the Hardware was in use at the time the problem occurred. The Contractor must pick up the Hardware requiring maintenance within forty-eight (48) hours of Canada requesting maintenance. Within six (6) working days of Canada requesting maintenance, the Contractor must restore the Hardware to Fully Functional Operation and return it to Canada at the location where it was in use at the time the problem occurred, or must deliver a replacement that meets the requirements of the Contract.
3. For On-Site Maintenance Service, during the PPM throughout the Hardware Maintenance Period, the Contractor must perform on-site maintenance on any Hardware for which a problem is reported at the location in Canada where the Hardware was in use at the time the problem occurred, in accordance with the following:
 - a. The Contractor must arrive on site within the following timeframes:
 - i. A service technician must respond by telephone within 1 hour of the telephone call for service and a service technician must arrive at the site within twenty-four (24) hours of the initial call requesting service during Government of Canada standard working hours

- b. After starting the maintenance, the Contractor must work continuously throughout the PPM until it returns the Hardware to Fully Functional Operation or until Canada suspends the work.
- c. Within 4 working days of Canada requesting maintenance, the Contractor must restore the Hardware to Fully Functional Operation or must deliver a replacement that meets the requirements of the Contract.



AUDIO VISUAL INSTALLATION AT NEW OFFICES, 3rd, 4th, & 15th FLOORS, 344 SLATER STREET, OTTAWA, ONTARIO

DRAWING LIST

AV-100	OFFICE FIT-UP, 3rd, 4th, & 15th FLOORS AUDIO-VISUAL TITLE PAGE
AV-101	3rd FLOOR AUDIO-VISUAL KEY PLAN
AV-102	4th FLOOR AUDIO-VISUAL KEY PLAN
AV-103	15th FLOOR AUDIO-VISUAL KEY PLAN
AV-104	ROOMS 330 & 331 DETAILS
AV-105	ROOMS 336 & 337 DETAILS
AV-106	ROOMS 114 & 411 DETAILS
AV-107	ROOMS 1505, 1511, & KIT/CHEN/COLLABORATION DETAILS
AV-108	ROOMS 1521, 1527, & 1530 DETAILS
AV-109	ROOMS 331, 441, 1505, 1522, & 1527 SINGLE LINE DIAGRAMS
AV-110	ROOMS 330 & 411 SINGLE LINE DIAGRAMS
AV-111	ROOMS 336, 1511, & 1538 SINGLE LINE DIAGRAMS
AV-112	ROOMS 337 & KIT/CHEN/COLLABORATION SINGLE LINE DIAGRAMS

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DO NOT SCALE DRAWINGS.
ALL MEASUREMENTS SHALL BE IN
MILLIMETERS.
ALL DIMENSIONS OTHERWISE NOTED ALL DIMENSIONS ARE IN
MILLIMETERS.
INDICATION COUVRANCE, TOUTES LES
DIMENSIONS SONT EXAMINÉES.
DIMENSIONS TO BE READ IN CONJUNCTION WITH
SPECIFICATIONS TO DRAWING.
LES DIMENSIONS DOIVANT ÊTRE LUES CONJUGUÉMENT
AVEC LES SPÉCIFICATIONS.

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE AND
REPORT ANY DISCREPANCIES TO ARCHITECT IMMEDIATELY.
PRIOR TO START OF CONSTRUCTION.
DIMENSIONS TO BE RECHECKED PRIOR TO POURING
CONCRETE.
TOUTES DIMENSIONS SONT À VÉRIFIER SUR LE SITE
ET À SIGNALER IMMÉDIATEMENT À L'ARCHITECTE
AVANT LE DÉBUT DE LA
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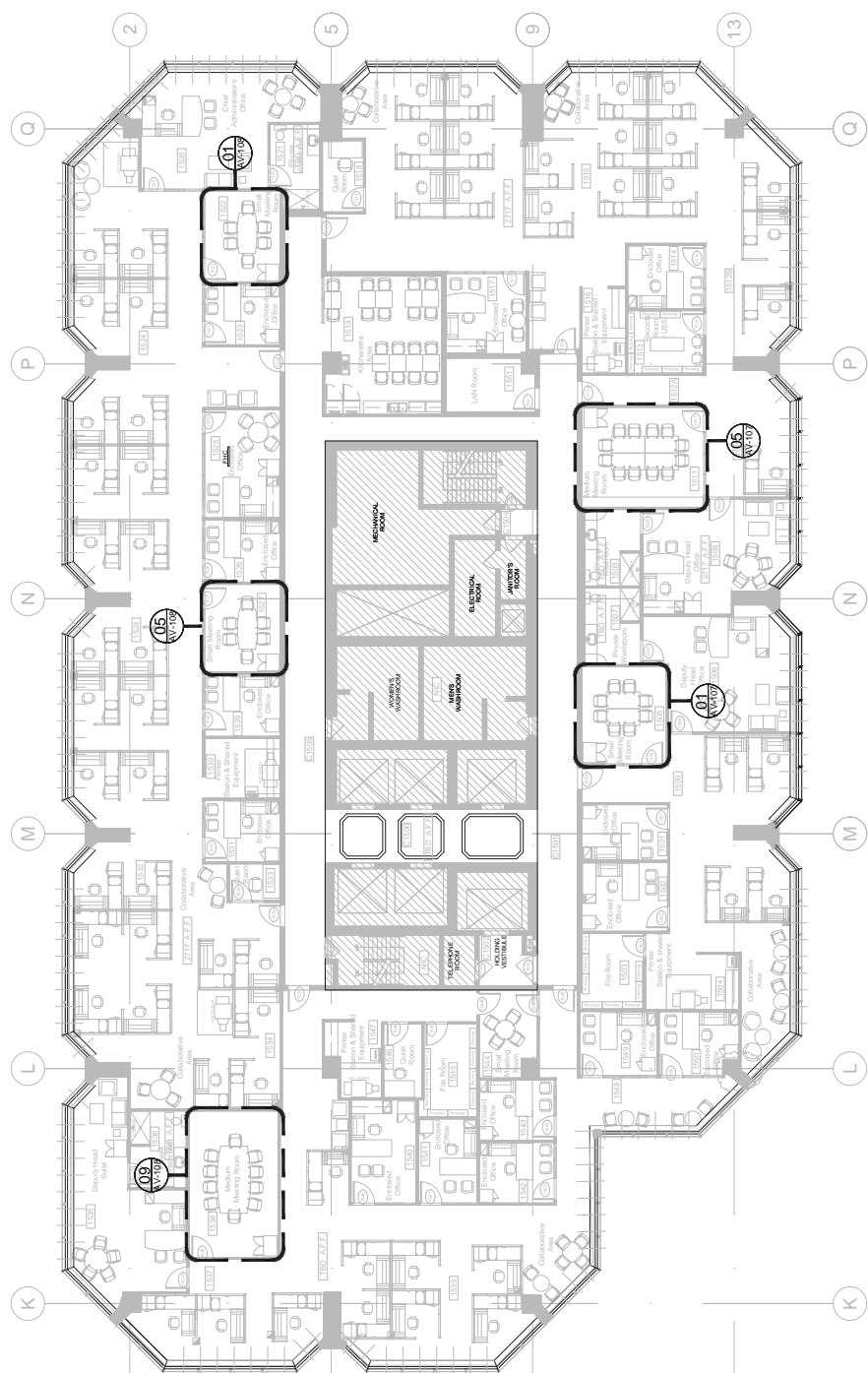
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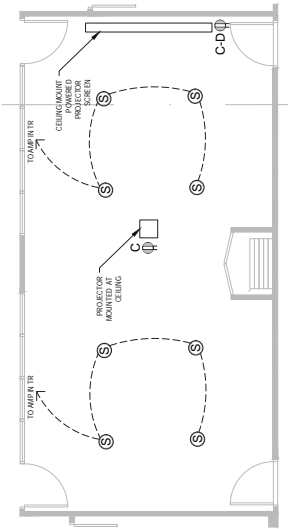
Administrative Tribunals
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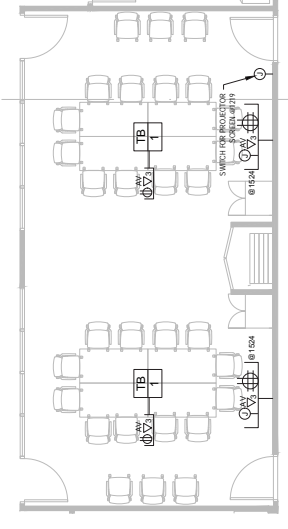
Designed By	R. Horne 2017/11/24	Conçu par	(yyyy/mm/dd)
Drawn By	L. Kennedy 2017/11/24	Dessiné par	(yyyy/mm/dd)
Reviewed By		Examiné par	(yyyy/mm/dd)
Approved By		Approuvé par	(yyyy/mm/dd)
Issued By		Soumis	(yyyy/mm/dd)
Project Manager	R. Horne	Administrateur de projet	
Project no.		No. du projet	

AV 103	No. du dessin
	Design no.

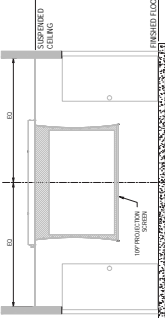




TYPE 1 ROOM: CEILING



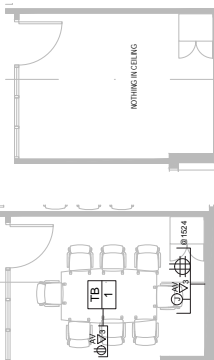
TYPE 1 ROOM: TABLE



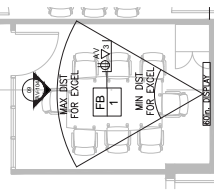
TYPE 1 ROOM: ELEVATION



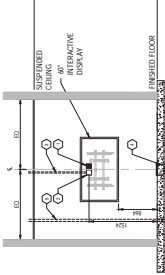
TYPE 1 ROOM: ELEVATION



TYPE 1 ROOM: TABLE



TYPE 1 ROOM: TABLE



TYPE 1 ROOM: ELEVATION

LEGEND

	CITY 1 CHAIR ELECTRICAL OUTLET FOR AN AIR WALL OUTLET AT 2.5m A.F.T OR AS NOTED, BY DIVISION 30.
	CITY 1 HORIZONTAL ELECTRICAL OUTLET FOR AN AIR WALL OUTLET AT STANDARD HEIGHT OR AS NOTED, BY DIVISION 30.
	FLOOR BOX IN FLOOR SLAB FLOOR BOX HAS POWER, DATA AND CABLES AS NOTED. 'X' IS IDENTIFIER NUMBER.
	TABLE ACCESS BOX. TABLE ACCESS BOX HAS POWER, DATA AND CABLES AS NOTED. 'X' IS IDENTIFIER NUMBER.
	WIRING DEVICE. WIRING DEVICE IS THE OUTLET FROM CEILING SPACE TO CABLE CONCEALMENT BOX AT STANDARD OUTLET HEIGHT OR AS NOTED.
	INSTALL SHIELDED AIR CABLES. 1 INDICATES QUANTITY OF CABLES TO INSTALL.
	CONDUIT WITH AIR CABLES. 'X' INDICATES QUANTITY OF CABLES TO INSTALL.
	POWER CITY 1 30 AMP CIRCUIT BREAKER CONNECT IN CEILING PLenum. COORDINATE WITH CONTRACTOR FOR CONNECTION.
	POWER CITY 1 30 AMP CIRCUIT BREAKER CONNECT IN CEILING PLenum. COORDINATE WITH CONTRACTOR FOR CONNECTION.
	AV. INSTALL OUTLET IN CEILING.
	CEILING MOUNTED SPEAKER.

- KEY NOTES**
1. CHAIR ELECTRICAL OUTLET BEHIND DISPLAY.
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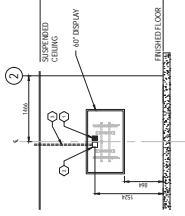
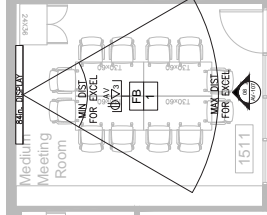
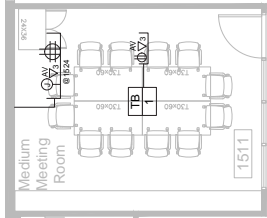
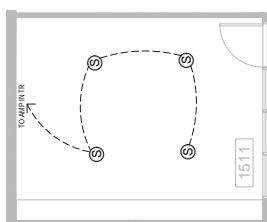
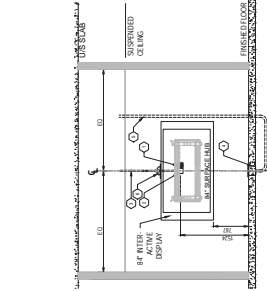
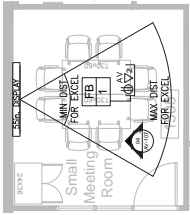
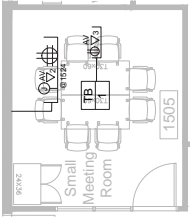
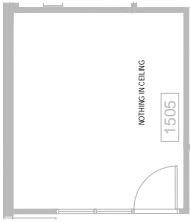
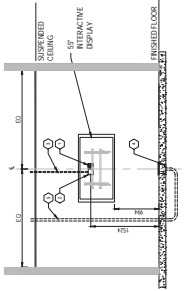
Administrative Tribunals
Support Services of Canada
Services administratifs
aux tribunaux administratifs










ROOMS 330 & 331
DETAILS







Designed By	R. Korne	Concept	Concept
Date	2017/12/28	Drawn by	Byzantium
Drawn By	L. Kennedy	Drawn by	Byzantium
Date	2017/12/28	Reviewed By	Byzantium
Reviewed By	Byzantium	Examined by	Byzantium
Date	Byzantium	Approved by	Byzantium
Approved By	Byzantium	Submitted	Submitted
Date	Byzantium	Project Manager	Administrateur de projet
Project no.	17070006	No. du projet	
Drawing no.	AV-104	No. de dessin	

02 TYPE 5 - ROOM 337 - ELEVATION
AV-107 SCALE 1/8"





	OUTLET WITH CABLE CHANNEL. OUTLET FOR CABLE CHANNEL. INSTALL OUTLET AT 25MM OFF C/S AS NOTED. (VIEW 5)
	OUTLET WITH CABLE CHANNEL. OUTLET FOR CABLE CHANNEL. INSTALL OUTLET AT STANDARD HEIGHT OF 900MM. (VIEW 5)
	FLOOR/CEILING IS NOTED. 'X' IS FLOOR NUMBER, 'D' IS DOWN AND 'U' IS UP. FLOOR NUMBER IS NOTED. 'X' IS FLOOR NUMBER, 'D' IS DOWN AND 'U' IS UP.
	TABLE ACCESS BOX. ACCESS BOXES WITH POWER, DATA AND CABLES ARE NOTED. 'X' IS FLOOR NUMBER, 'D' IS DOWN AND 'U' IS UP.
	WIRE TRAY. TRAY. PROPOSE '12 X 12MM' TRAY. TRAY FROM CEILING SPACE. COORDINATE WITH CABLES TO BE INSTALLED AT TRAY.
	INSTALL SPLITTER (IN CABLES) / INDICATES QUANTITY TONS/PAIR.
	OUTLET WITH CAT/CABLES. 'X' INDICATES QUANTITY OF CABLES TO INSTALL.
	PROVIDE OUTLET WITH 25MM-OD RIGID CONNECT IN CEILING PLUMB. COORDINATE WITH CABLE CONNECTION FOR CABLE CHANNEL.
	OUTLET WITH 25MM-OD RIGID CONNECT. OUTLET FOR CABLE CHANNEL. COORDINATE WITH CABLE CONNECTION FOR CABLE CHANNEL.

		
	Support Services of Canada	Ontario Support Services
		
	Service national du Québec du Québec (ministère de l'Éducation)	Service national de l'Ontario de l'Ontario (ministère de l'Éducation)

revision	description	date
1	IS BUILT FOR THE RCHSR	10/11/05
2	IS BUILT FOR 100%	09/01/02

project

**Administrative Tribunals
Support Service of Canada
Service Canadien d'appui
aux tribunaux administratifs**

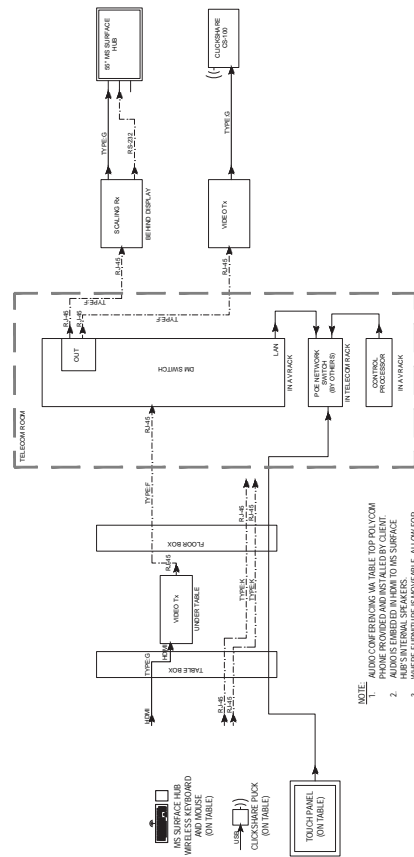
3rd, 4th & 15th Floors, 344 Slater St. Ottawa, ON
3e, 4e & 15e Étages, 344 rue Slater, Ottawa, ON

drawing

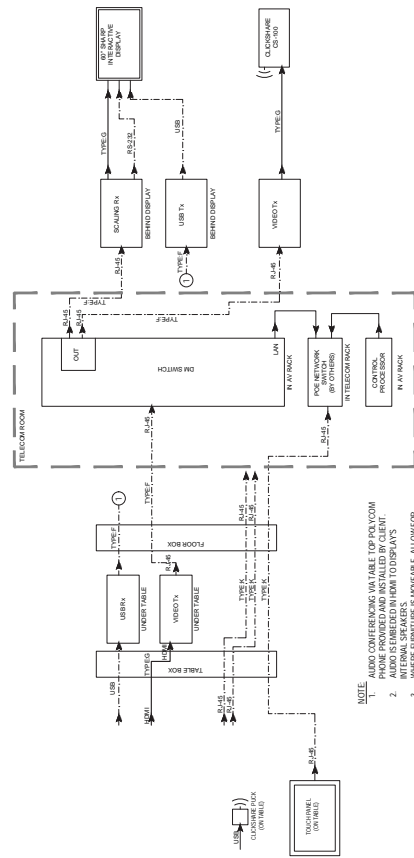
design

ROOMS 1505, 1511,
&
KITCHEN/COLLABORATION
DETAILS

Designed By	R.Hine 2017/11/04	Concurred by
Date		(yyyy/mm/dd)
Drawn By	L.Kennedy 2017/11/04	Drawing per
Date		(yyyy/mm/dd)
Reviewed By		Examiner per
Date		(yyyy/mm/dd)
Approved By		Approuver par
Date		(yyyy/mm/dd)
Tender	Soumission	
Project Manager	R.Hine	
Project no.	Administrateur de projets	No. du projet
	17070006	
Drawing no.		No. du dessin
		AV-107



1. AUDIO/CONFERENCING VIA TABLE TOP POLYCOM PHONE PROVIDED AND INSTALLED BY CLIENT.
2. AUDIO IS EMBEDDED IN HDMI TO INS SURFACE. HUB'S INTERNAL SPEAKERS.
3. WHERE FURNITURE IS MOVEABLE, ALLOW FOR TOUCH PANEL TO BE DISCONNECTED AT TABLE AND CONNECTIONS AT FLOOR BOX TO BE DISCONNECTED. COORDINATE WITH ARCHITECT WHICH TABLE IS TO HAVE TABLE BOX.



NOTE

1. AUDIO CONFERENCE VIA TABLE TOP POLYCOM PHONE PROVIDED AND INSTALLED BY CLIENT.
2. AUDIO IS EMBEDDED IN HDMI TO DISPLAYS
3. WHERE FURNITURE IS MOVEABLE, ALLOW FOR TOUCH PANEL TO BE DISCONNECTED AT TABLE, AND CONNECTIONS AT FLOOR BOX TO BE DISCONNECTED. COORDINATE WITH ARCHITECT WHICH TABLE IS TO HAVE TABLE BOX

CABLE LEGEND

- | | |
|--------|--|
| TYPE A | VGA W/ AUDIO |
| TYPE B | SERIAL - 1 PRU 17P, 22 AWG, SHIELDED (CMP) |
| TYPE C | SERIAL - 2 PRU 17P, 22 AWG, SHIELDED (CMP) |
| TYPE D | SPEAKERPOWER- 2118 SPEAKER CABLE (CMP) |
| TYPE E | DVD-I |
| TYPE E | SERIAL2 - 1 PRU 17P, 22 AWG, SHIELDED W/ DRAIN (CMP) |
| TYPE F | STP - SHIELD 4 PRU 17P, 21 AWG, CAT5A, CMP, MANUFACTURER RECOMMENDED CABLE |
| TYPE G | HDMI - H/M-MALE TO H/M-MALE |
| TYPE H | USB |
| TYPE I | MMF/FIBRE OPTIC CABLE |
| TYPE J | SERIAL - 1 PRU 17P, 20 AWG, SHIELDED W/ DRAIN (CMP) |
| TYPE K | STP - 4 PRU 23 AWG, CAT6 (CMP) |



DRAWING LEGEND / LÉGENDE DE DESSIN

AFT / DPF	ABOVE FINISHED FLOOR / DESSUS PLANCHER FIM
UNO / S/C	UNLESS NOTED OTHERWISE / SAUF INDICATION CONTRAIRE
OC / SC	ON CENTRES / SUR CENTRES
TYT / TYP	TYPICAL / TYPE
CL / LC	CENTRELINE / LIGNE CENTRALE

NOTES

- DO NOT SCALE DRAWINGS.
NE MESUREZ PAS SUR LES LIGES DES SWS
- UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN
SAUF INDICATION CONTRAIRE, TOUTES LES
DIMENSIONS SONT EN MILLIMÈTRES
- ALL DIMENSIONS TO BE READ IN CONJUNCTION WITH
SPECIFICATIONS, PARTS AND
DESIGNING DOCUMENTS, ETRE LUS CONJOINTEMENT
AVEC LES SPECIFICATIONS
- CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE AND
REPORT TO ENGINEER ANY ERRORS OR OMISSIONS
PRIOR TO START OF CONSTRUCTION.
- L'ENTREPRENEUR DOIT VÉRIFIER TOUTES LES
DIMENSIONS SUR LE SITE ET SIGNALER À L'INGÉNIEUR
TOUTES ERREURS OU OMISSIONS AVANT LE DÉBUT DE LA
CONSTRUCTION.

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project

**Administrative Tribunals
Support Service of Canada
Service Canadien d'appui
aux tribunaux administratifs**

3rd, 4th, & 16th Floors, 344 Slater St., Ottawa, ON
K1R 7V8, Canada
Tel: 613-993-3232, 1-800-961-3232
Fax: 613-993-3233, 1-800-961-3233
E-mail: info@support.gc.ca

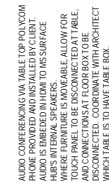
drawing	desain
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ROOMS 331, 414,
1505, 1522, & 1527
SINGLE LINE
DIAGRAMS

[illegible]

travelling no.	No. du dessin
	AV-109

USDC - AV - 2018-03-02 DMG



CABLE LEGEND
TYPE A: VGA W/AUDIO
TYPE B: SERIAL - 2 PRUTP 22 AWG SHIELDED (CMP)
TYPE C: SPEAKER POWER - 2/18 SPEAKER CABLE (CMP)
TYPE D: DVI-D
TYPE E: SERIAL2 - 1 PRUTP 22 AWG SHIELDED W/ DRAIN (CMP)
TYPE F: STP - SHIELD 4 PRUTP 22 AWG CAT5A (CMP)
TYPE G: HDMI - HDMI MALE TO FEMALE
TYPE H: USB
TYPE I: MM FIBRE OPTIC CABLE
TYPE J: SERIAL1 - 2 PRUTP 22 AWG SHIELDED W/ DRAIN (CMP)
TYPE K: UTP - 4 PRUTP 23 AWG CAT6 (CMP)

NOTE
1. WHERE FURNITURE IS MOVABLE, ALLOW FOR TOUCH PANEL TO BE DISCONNECTED AT TABLE AND CONNECTIONS AT FLOOR BOX TO BE DISCONNECTED. COORDINATE WITH ARCHITECT WHICH TABLE IS MOVABLE TABLE BOX.

