Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:

Travaux publics et Services gouvernementaux Canada
Place Bonaventure, portail Sud-Oue
800, rue de La Gauchetière Ouest
7e étage, suite 7300
Montréal
Québec
H5A 1L6

SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

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

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

Comments - Commentaires

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

Issuing Office - Bureau de distribution

Travaux publics et Services gouvernementaux Canada
Place Bonaventure, portail Sud-Oue
800, rue de La Gauchetière Ouest
7e étage, suite 7300
Montréal
Québec
H5A 1L6

Title - Sujet Réfection de la place publique OACI	
Solicitation No. - N° de l'invitation EE520-192456/A	**Amendment No. - N° modif.** 003
Client Reference No. - N° de référence du client EE520-192456	**Date** 2019-02-14
GETS Reference No. - N° de référence de SEAG PW-$MTC-110-15190	
File No. - N° de dossier MTC-8-41344 (110)	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-02-26	**Time Zone** **Fuseau horaire** Heure Normale du l'Est HNE
F.O.B. - F.A.B. **Plant-Usine:** ☐ **Destination:** ☑ **Other-Autre:** ☐	
Address Enquiries to: - Adresser toutes questions à: Hivon, Michèle	**Buyer Id - Id de l'acheteur** mtc110
Telephone No. - N° de téléphone (514) 607-4952 ( )	**FAX No. - N° de FAX** (514) 496-3822
Destination - of Goods, Services, and Construction: **Destination - des biens, services et construction:**	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	**Delivery Offered - Livraison proposée**
Vendor/Firm Name and Address **Raison sociale et adresse du fournisseur/de l'entrepreneur** **Telephone No. - N° de téléphone** **Facsimile No. - N° de télécopieur**	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) **Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)** **Signature**	**Date**

Canada

Public Place Refection – ICAO House

Montreal (Qc)

AMENDMENT 003

THE INVITATION TO TENDER IS MODIFIED AS MENTIONED BELOW:

1- Tenderers are advised that **Addendum no 02** and its attached documents form integral part of the tender documents.

ALL OTHER TERMS, CLAUSES AND CONDITIONS REMAIN UNCHANGED.

Travaux publics et Services gouvernementaux Canada | Public Works and Government Services Canada

Région du Québec | Quebec Region

Public Works and Government Services Canada

NOTICE TO THE BIDDER
ADDENDUM NO. 02

February 14, 2019

Object: ICAO House – Public Place Refection
999, boulevard Robert-Bourassa, Montréal

PWGSC no : R.090297.150

Please note that changes have been made to the tender documents for the mentioned quoted bid in object.

You must take these changes into account when preparing your submission and proceed with the necessary corrections. This addendum is an integral part of the tender documents.

SPECIFICATION – Revised sections

DIVISION 26

- Section 26 05 00 Common work results for electrical — 7 pages

PLANS

Landscape architecture

- AP08 TECHNICAL DETAILS — 1 sheet

Electrical

- EL01 LEGEND AND LIST OF DRAWING — 1 sheet
  - Adding general Notes
- EL02 PROPOSED INSTALLATION LEVEL BASEMENT — 1 sheet
  - Modification of the power supply of systems
  - Modification of the conduit run and control cables
- EL03 PROPOSED INSTALLATION LEVEL A — 1 sheet
  - Changing the conduit runs and lighting control wiring
  - Elimination of conduit runs and electrical supply wiring

- Elimination of a note
- Addition of a specification for a conduit and cable run

- EL04 PROPOSED INSTALLATION LEVEL 01 — 1 sheet
  - Elimination of a conduit run
  - Addition of a specification for a conduit and cable run
  - Elimination of a note

- EL06 LEVEL 2 PLAN DEMOLITION AND PROPOSED — 1 sheet
  - Note changes
  - Addition of a note
  - Elimination of a note and a conduit passage

- EL07 LEVEL 3 PLAN PART 1/2 DEMOLITION AND PROPOSED — 1 sheet
  - Modification of a note
  - Addition of a note
  - Elimination of conduit runs and wiring

- EL08 LEVEL 3 PLAN PART 2/2 DEMOLITION AND PROPOSED — 1 sheet
  - Elimination of conduit and wiring runs and notes
  - Addition of a note

- EL09 LEVEL 6 PLAN PROPOSED INSTALLATION — 1 sheet
  - Elimination of level 6, north side
  - Addition of details
  - Modification of power and control systems
  - Addition of a note

- EL11 LEVEL 17 1/2 DEMOLITION AND PROPOSED — 1 sheet
  - Elimination of conduit runs and wiring in the electrical-mechanical room on the 17th floor
  - Relocation of the DMX power and control boxes outside

- EL12 LEVEL 17 2/3 HIGHER PART DEMOLITION AND PROPOSED — 1 sheet
  - Elimination of conduit and cable passage inside

- EL13 PROPOSED LIGHTING WEST ELEVATION — 1 sheet
  - Modification of the electrical and control installation and connections
  - Note modifications
  - Addition of a note

- EL14 PROPOSEDLIGHTING NORTH AND SOUTH ELEVATIONS — 1 sheet
  - Modification of the electrical and control installation and connections
  - Note modifications
  - Addition of a note

- EL15 PANELS SCHEDULE PROPOSED — 1 sheet
  - Elimination of electrical panels and notes
  - Addition of an electrical distribution panel
  - Modification of a note

- EL18 CONTROL SCHEMATICS FOR LIGTHING NORTH AND SOUTH ELEVATIONS 1 sheet
  - Adding a DMX Bus connection table

Ce document a été examiné et approuvé dans la discipline suivante/
This document was examined and approved by the following discipline:

Louis Lajoie, ing. Électricité
eng. Electricity

DIVISION 26

Part 1 General

1.1 REFERENCES

.1 Definitions:

.1 Electrical and electronic terms: Unless otherwise specified or indicated, terms used in these specifications, and on drawings, are those defined by IEEE SP1122.

.2 Reference Standards:

.1 CSA Group:

.1 CSA C22.1-12, Canadian Electrical Code, Part 1 (22nd Edition), Safety Standard for Electrical Installations.

.2 CSA C22.2 No. 10-10, Code de construction du Québec, Chapitre V - Électricité.

.3 CAN/CSA-C22.3 No.1-10, Overhead Systems.

.4 CAN/CSA-C22.2 No. 7-15 Underground Systems.

.5 CAN3-C235-83(R2010), Preferred Voltage Levels for AC Systems, 0 to 50,000 V.

.2 Institute of Electrical and Electronics (IEEE)/National Electrical Safety Code Product Line (NESC):

.1 IEEE SP1122-2000, The Authoritative Dictionary of IEEE Standards Terms, 7th Edition.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Shop Drawings:

.1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Quebec, Canada.

.2 Submit wiring diagrams and installation details of equipment indicating proposed location, layout and arrangement, control panels, accessories, piping, ductwork, and other items that must be shown to ensure co-ordinated installation.

.3 Identify on wiring diagrams circuit terminals and indicate internal wiring for each item of equipment and interconnection between each item of equipment.

.4 Indicate of drawings clearances for operation, maintenance, and replacement of operating equipment devices.

.5 Submit eight copies to authority having jurisdiction.

.6 If changes are required, notify Departmental Representative of these changes before they are made.

.3 Certificates:

.1 Provide CSA certified equipment and material.

.2 Where CSA certified equipment and material is not available, submit such equipment and material to authority having jurisdiction for special approval before delivery to site.

.3 Submit test results of installed electrical systems and instrumentation.

.4 Permits and fees: In accordance with General Conditions of Contract.

.5 Submit, upon completion of Work, load balance report as described in PART 3 - LOAD BALANCE.

.6 Submit certificate of acceptance from authority having jurisdiction upon completion of Work to Departmental Representative.

.4 Manufacturer's Field Reports: Submit to Departmental Representative manufacturer's written report, within 3 days of review, verifying compliance of Work and electrical system and instrumentation testing, as described in PART 3 - FIELD QUALITY CONTROL.

1.3 CLOSEOUT SUBMITTALS

.1 Submit in accordance with Section 01 78 00 - Closeout Submittals.

.2 Operation and Maintenance Data: Submit operation and maintenance data for incorporation into manual.

.1 Provide for each system and principal item of equipment as specified in technical sections for use by operation and maintenance personnel.

.2 Operating instructions to include following:

.1 Wiring diagrams, control diagrams, and control sequence for each principal system and item of equipment.

.2 Start-up, proper adjustment, operating, lubrication, and shutdown procedures.

.3 Safety precautions.

.4 Procedures to be followed in event of equipment failure.

.5 Other items of instruction as recommended by manufacturer of each system or item of equipment.

.3 Print or engrave operating instructions and frame under glass or in approved laminated plastic.

.4 Post instructions where directed.

.5 For operating instructions exposed to weather, provide weather-resistant materials or weatherproof enclosures.

.6 Ensure operating instructions will not fade when exposed to sunlight.

1.4 DELIVERY, STORAGE, AND HANDLING

.1 Delivery and Acceptance Requirements: Deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.2 Storage and Handling Requirements:

.1 Store materials off ground in dry location in accordance with manufacturer's recommendations in clean, dry, and well-ventilated area.

.2 Store and protect from nicks, scratches, and blemishes.

.3 Replace defective or damaged materials with new.

.3 Packaging Waste Management: Remove for reuse by manufacturer of pallets, crates, padding, and packaging materials as specified in Construction Waste Management Plan, in accordance with Section 01 74 21 - Waste Management and Disposal.

Part 2 Products

2.1 DESIGN REQUIREMENTS

.1 Operating Voltages: To CAN3-C235.

.2 Motors, electric heating, control, and distribution devices and equipment to operate satisfactorily at 60 Hz within normal operating limits established by above Standard.

.1 Equipment to operate in extreme operating conditions established in above standard without damage to equipment.

.3 Language Operating Requirements: Provide identification nameplates and labels for control items, both in English and French.

.4 Use one nameplate and label for both languages.

2.2 MATERIALS AND EQUIPMENT

.1 Material and equipment to be CSA certified. Where CSA certified material and equipment are not available, obtain special approval from authority having jurisdiction before delivery to site and submit such approval as described in PART 1 - ACTION AND INFORMATIONAL SUBMITTALS.

.2 Assembled control panels and component shall be CSA certified or equivalent.

2.3 ELECTRIC MOTORS, EQUIPMENT, AND CONTROLS

.1 Verify installation and co-ordination responsibilities related to motors, equipment, and controls, as indicated.

2.4 WARNING SIGNS

.1 Warning Signs: In accordance with Departmental Representative's requirements.

.2 Porcelain enamel signs, minimum size 175 x 250 mm.

2.5 WIRING TERMINATIONS

.1 Ensure lugs, terminals, and screws used for termination of wiring are suitable for either copper or aluminum conductors.

2.6 EQUIPMENT IDENTIFICATION

.1 Identify electrical equipment with nameplates and labels as follows:

.1 Nameplates: Lamicoid 3 mm thick plastic engraving sheet, black face, white core, lettering accurately aligned and engraved into core mechanically attached with self-tapping screws.

.2 Sizes as follows:

NAMEPLATE SIZES			
1	10 x 50 mm	1 line	3 mm high letters
2	12 x 70 mm	1 line	5 mm high letters
3	12 x 70 mm	2 lines	3 mm high letters
4	20 x 90 mm	1 line	8 mm high letters
5	20 x 90 mm	2 lines	5 mm high letters
6	25 x 100 mm	1 line	12 mm high letters
7	25 x 100 mm	2 lines	6 mm high letters

.2 Labels: Embossed plastic labels with 6 mm high letters, unless specified otherwise.

.3 Wording on nameplates and labels to be approved by Departmental Representative prior to manufacture.

.4 Allow for minimum of twenty-five (25) letters per nameplate.

.5 Nameplates for terminal cabinets and junction boxes to indicate system and/or voltage characteristics.

.6 Identify equipment with Size 3 labels engraved "ASSET INVENTORY NO. XXX" as directed by Departmental Representative.

.7 Disconnects, Starters, and Contactors: Indicate equipment being controlled and voltage.

.8 Terminal Cabinets and Pull Boxes: Indicate system and voltage.

.9 Transformers: Indicate capacity, primary, and secondary voltages.

2.7 WIRING IDENTIFICATION

.1 When colour jacket conductors are not available, identify wiring with permanent indelible identifying markings, numbered, and coloured plastic tapes, on both ends of phase conductors of feeders and branch circuit wiring.

.2 Maintain phase sequence and colour coding throughout.

.3 Colour Coding: To CSA C22.1.

.4 Use colour coded wires in communication cables, matched throughout system.

2.8 CONDUIT AND CABLE IDENTIFICATION

.1 Colour code conduits, boxes, and metallic sheathed cables.

.2 Code with plastic tape or paint at points where conduit or cable enters wall, ceiling, or floor and at 15 m intervals.

.3 Colours: 25 mm wide prime colour and 20 mm wide auxiliary colour.

Prime	Auxiliary	
up to 250 V	Yellow	---
up to 600 V	Yellow	Green
up to 5 kV	Yellow	Blue
up to 15 kV	Yellow	Red
Telephone	Green	---
Other Communication Systems	Green	Blue
Fire Alarm	Red	---
Emergency Voice	Red	Blue
Other Security Systems	Red	Yellow

2.9 FINISHES

.1 Shop finish metal enclosure surfaces by application of rust resistant primer, inside and outside, and at least two coats of finish enamel.

Part 3 Execution

3.1 EXAMINATION

.1 Verification of Conditions: Verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for installation in accordance with manufacturer's written instructions.

.1 Visually inspect substrate in presence of Departmental Representative.

.2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.

.3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

3.2 INSTALLATION

.1 Do complete installation in accordance with CSA C22.1, except where specified otherwise.

.2 Do overhead systems in accordance with CAN/CSA-C22.3 No. 1, except where specified otherwise.

.3 Do underground systems in accordance with CAN/CSA-C22.3 No. 7, except where specified otherwise.

3.3 NAMEPLATES AND LABELS

.1 Ensure manufacturer's nameplates, CSA labels, and identification nameplates are visible and legible after equipment is installed.

3.4 CONDUIT AND CABLE INSTALLATION

.1 Install conduit and sleeves prior to pouring of concrete.

.1 Sleeves through concrete: Schedule 40 steel pipe, sized for free passage of conduit, and protruding 50 mm.

.2 If plastic sleeves are used in fire-rated walls or floors, remove before conduit installation.

.3 Install cables, conduits, and fittings embedded or plastered over, close to building structure so furring can be kept to minimum.

3.5 CO-ORDINATION OF PROTECTIVE DEVICES

.1 Ensure circuit protective devices such as overcurrent trips, relays, and fuses are installed to required values and settings.

3.6 FIELD QUALITY CONTROL

.1 Load Balance:

.1 Measure phase current to panel boards with normal loads (lighting) operating at time of acceptance; adjust branch circuit connections as required to obtain best balance of current between phases and record changes.

.2 Measure phase voltages at loads and adjust transformer taps to within 2% of rated voltage of equipment.

.3 Provide upon completion of work, load balance report as directed in PART 1 - ACTION AND INFORMATIONAL SUBMITTALS, phase and neutral currents on panel boards, dry-core transformers and motor control centres, operating under normal load, as well as hour and date on which each load was measured, and voltage at time of test.

.2 Conduct following tests in accordance with Section 01 45 00 - Quality Control.

.1 Power distribution system including phasing, voltage, grounding, and load balancing.

.2 Circuits originating from branch distribution panels.

.3 Lighting and its control.

.4 Motors, heaters, and associated control equipment, including sequenced operation of systems, where applicable.

.5 Insulation resistance testing:

.1 Megger circuits, feeders and equipment up to 350 V with a 500 V instrument.

.2 Megger 350-600 V circuits, feeders and equipment with a 1000 V instrument.

.3 Check resistance to ground before energizing.

.3 Carry out tests in presence of Departmental Representative.

.4 Provide instruments, meters, equipment, and personnel required to conduct tests during and at conclusion of project.

.5 Manufacturer's Field Services:

.1 Obtain written report from manufacturer verifying compliance of Work, in handling, installing, applying, protecting and cleaning of product and submit Manufacturer's Field Reports as described in PART 1 - ACTION AND INFORMATIONAL SUBMITTALS.

.2 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

3.7 SYSTEM START-UP

.1 Instruct Departmental Representative and operating personnel in operation, care and maintenance of systems, system equipment, and components.

.2 Arrange and pay for services of manufacturer's factory service engineer to supervise start-up of installation, check, adjust, balance and calibrate components, and instruct operating personnel.

.3 Provide these services for such period and for as many visits as necessary to put equipment in operation, and ensure that operating personnel are conversant with aspects of its care and operation.

3.8 CLEANING

.1 Progress Cleaning: Clean in accordance with Section 01 74 11 - Cleaning.

.1 Leave Work area clean at end of each day.

.2 Final Cleaning: Upon completion remove surplus materials, rubbish, tools, and equipment in accordance with Section 01 74 11 - Cleaning.

3.9 FIREPROOFING

1

.1 When conduits or cables pass through walls and fire-resistant floors, ensure fire and smoke sealing using fireproof products and sealing kits. The installation must comply with the requirements of CAN/CGSB 19.13-M87 and the manufacturer's recommendations.

END OF SECTION