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

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

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

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

Comments - Commentaires

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

Issuing Office - Bureau de distribution
Defence Communications Division. (QD)
11 Laurier St./11, rue Laurier
Place du Portage, Phase III, 8C2
Gatineau, Québec K1A 0S5

Title - Sujet LAND MOBILE RADIO FOR THE CBSA	
Solicitation No. - N° de l'invitation 47419-166123/A	Amendment No. - N° modif. 004
Client Reference No. - N° de référence du client 1000326123	Date 2016-04-25
GETS Reference No. - N° de référence de SEAG PW-\$\$QD-029-25743	
File No. - N° de dossier 029qd.47419-166123	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-05-30	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes	
Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Bright, James	Buyer Id - Id de l'acheteur 029qd
Telephone No. - N° de téléphone (819) 956-6181 ()	FAX No. - N° de FAX (819) 956-0636
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

Amendment #4 is raised for the Land Mobile Radio Request for Proposal (RFP) number 47419-166123.

The intent of this amendment is to provide clarifying responses to Industry questions and where applicable, amend the RFP in response to Industry questions.

Question 3:

ANNEX A, SOW Section 14.1

The Annex A SOW Section 14.1.1 refers to AES Encryption. As end to end encryption has been specified in Canadian Federal Government specifications and RFP's for at least the past 10 years, please confirm that end to end encryption is a requirement for this system without any interim decryption/re-encryption non-secure points within the system. Furthermore with reference to a resulting configuration including console equipment - please confirm that end-to-end encryption of voice communications is a requirement such that voice communications remains encrypted between the portable/mobile/base station radios and the referenced console in Section 14.1.9 of the SOW without any intervening decryption or encryption.

Answer 3:

The System requires end to end encryption without any interim decryption/re-encryption such that voice communications remains encrypted between the portable/mobile/base station radios and the referenced console in Section 14.1.9 of the SOW without any intervening decryption or encryption.

Question 4:

ANNEX A, SOW Section 5

The Annex A SOW, Section 5 "Site Audits" do not reference any industry standard for Radio Site Infrastructure to baseline the audits. Insofar as the most comprehensive site standard that is used for developing and auditing tens of thousands of radio sites world wide is the Motorola R56 Standard, please confirm that the Motorola R56 standard will be the standard by which the audits are to be conducted.

Answer 4:

CBSA is expecting that the audits will be conducted per the Motorola R56 standard. Although, the Motorola R56 standard is the most comprehensive, and has been widely accepted and recognized as Standard and Guidelines for Communication Sites, it is not on the CSA, UL or IEEE list of approved standards. Therefore, if the Contractor recommends conducting audit process as per industry individual standards such as CSA-T527, CSA-T528, CSA-T529, CSA-C22 and CSA-S37, CBSA will be open to discuss with the Contractor on their recommendations.

All Bidders are responsible to provide preferred list of standard(s) for the system audits process in the bidding documents.

Question 5:

Annex A, SOW Section 14.1.7

Amendment 1 describes an antenna type and model for the "transmitter antenna" and the "receiver antenna", however, Annex A SOW Section 14.1.7 states that the system must include "One Tx/Rx omnidirectional antenna per site". Please confirm that the requirement is to supply a single antenna per site and that the transmit and receive signals are to be combined or duplexed onto that single antenna at each site.

Answer 5:

Existing frequency licences indicate ERP level for frequencies 772.60625 MHz and 772.48125 MHz at each location:

- | | |
|------------------------------|-----------|
| 1. Nanaimo | 40.738 W; |
| 2. Mount Newton | 26.915 W; |
| 3. 1175 Douglas St. Victoria | 26.915 W; |

Number of antennas:

1. Nanaimo:
CBSA suggestion: two antennas transmit and receive antenna.
CBSA is going to accept one transmit/receive antenna if this is the Contractor choice.
2. Mount Newton:
CBSA recommendation: one transmit/receive antenna, 50 FT above ground level;
3. 1175 Douglas St., Victoria CBSA recommendation: one transmit/receive antenna.

All Bidders are responsible to select antenna(s), filtering, combining and/or duplexers to optimize system performance.

CBSA is taking the responsibility to notify Spectrum Office regarding final system antenna and filtering configuration.

Question 6:

Do the site audits include a compatibility study with the CSA Standard S37-13 for all existing antenna systems and for the proposed antenna systems to be installed in the selected towers? If so, please indicate that the site landlord will be responsible to provide all information related to existing antenna systems present on the tower.

Answer 6:

Yes, the site audits include a compatibility study with the CSA Standard S37-13 for all existing antenna systems and for the proposed antenna systems to be installed in the selected towers.

The site landlord will provide all information related to existing antenna systems present on the tower.

Question 7:

In the event that the site audit CSA S37-13 compatibility study shows that the tower does not meet the standard, please indicate if the Contractor is responsible to propose remedy or if the Landlord is solely responsible.

Answer 7:

The Contractor will be responsible to propose and implement solutions.

Question 8:

Please indicate if the Contractor will be responsible for any aspects related to the CPC-2-0-03 from the Department of Innovation, Science and Economic Development (ISED).

Answer 8:

Yes, the Contractor is responsible for any aspects related to the CPC-2-0-03.

Question 9:

Please indicate if the Contractor will be responsible to provide a proof of Safety Code 6 compatibility for each site.

Answer 9:

Yes, the Contractor is responsible to provide a proof of Safety Code 6 compatibility for each site.

Question 10:

Please indicate if the Contractor is responsible to evaluate the heat dissipation impact of the equipment and evaluate its compatibility with each site. If so, please indicate that the Landlords will be responsible to provide all other equipment required to assure adequate dissipation and provide acceptable cooling capacity.

Answer 10:

Yes, the Contractor is responsible to evaluate the heat dissipation impact of the equipment and evaluate its compatibility with each site. The Landlords will be responsible to provide all other equipment required to assure adequate dissipation, and provide acceptable cooling capacity.

Question 11:

In the event that electrical availability for the CBSA equipment is judged not sufficient, please indicate if the Contractor is responsible for any electrical modifications to the sites or if Landlords will be tasked to implement any or all required modifications.

Answer 11:

In general, each site has electrical power available. Electrical power consumption of the CBSA radio equipment will be provided by the Contractor and will be assessed against the electrical power availability at each location. The Contractor is responsible to provide any electrical modifications in two locations: Cottle Hill, Nanaimo and Mont Newton. CBSA is responsible to provide required electrical power to supply the radio equipment at 1175 Douglas Street, Victoria.

Question 12:

During the installation and tower climbing, please indicate if the Landlords are responsible to ensure that the maximum NIR (non-ionising radiation) levels will be safe, according to the Controlled Environment limits of the Safety Code 6, for workers without RF protection suits. Some sites are hosting broadcasting systems (FM and TV) and these services might have to be reduced or shut down. Please indicate if the work might have to be performed overnight following broadcast shutdowns.

Answer 12:

The Contractor is responsible to ensure that the maximum NIR (non-ionising radiation) levels will be safe, according to the Controlled Environment limits of the Safety Code 6, for workers without RF protection suits.

In general, all radio equipment installations must be completed within regular working hours 8:00 AM – 5:00PM. CBSA is going to support the Contractor request for overnight installation if this is the only time to ensure that the maximum NIR level is safe, according to the Controlled Environment limits of the Safety Code 6, for workers without RF protection suits.

Question 13:

Please indicate if the Contractor is responsible to evaluate the added load on the Landlord generators and confirm that the Landlords are responsible to provide safety power.

Answer 13:

The Contractor is responsible to evaluate the added load on the Landlord generators. CBSA is going to be working with the Landlords to provide safety power.

Question 14:

Please confirm that no independent hydro meter is required and that electrical power will be directly received from a panel identify by the landlord. It is understood that the power will be safety power on generator.

Answer 14:

No independent hydro meters are required. CBSA is responsible to work with the Landlords to provide the safety power on generator.

Question 15:

Please indicate if the Contractor is responsible to provide Internet, VOIP or any other connectivity solutions to the site. Please specify the minimum internet speed requirements (uplink and downlink).

Answer 15:

The Contractor is responsible to specify the minimum speed requirements (uplink and downlink).

CBSA is responsible to provide Internet, VOIP to the site.

Internet, VOIP available at:

1. Telecommunication shelter, patch panel, Cottle Hill, Nanaimo;
2. Telecommunication shelter, patch panel, Mount Newton;
3. Telecommunication Room, 2nd floor patch panel, 1175 Douglas Street, Victoria.

Question 16:

Please indicate if the monitoring system must report site environmental issues, such as:

- a. Loss of main power
- b. Indoor temperature
- c. Fire alarm
- d. Site door open intrusion

Answer 16:

The monitoring system must report site environmental issues, such as: indoor temperature and loss of main power.

Question 17:

Please indicate if the equipment racks must be using front and back locking doors.

Answer 17:

Yes, the equipment racks must be using front and back locking doors

Question 18:

Please indicate what are the coverage objectives for the simulated radio coverage report, in terms of:

- a. Minimum reception threshold field strength (in $\text{dB}\mu\text{V}/\text{m}$)
- b. Service Availability % (time and location)

Answer 18:

The coverage objectives for the simulated radio coverage report are:

- Outdoor, street level, service availability for the XTS 5000 portable radios;
 - Service availability for the XTL 5000 mobile radio.
- c. Any Coverage Margin representation requirements in dB level (i.e. 0 dB, +3 dB, +10 dB, etc).
 - d. Indicate if a preferred propagation model should be used

Answer:

CBSA has no recommendation on preferred propagation model. The Contractor must provide propagation model and propagation prediction software used for the system computer coverage simulation.

- e. Indicate if a minimal digital elevation database resolution is required (in arc-seconds)

Answer: 1arc-seconds if available at no extra cost or the lowest available.

- f. Indicate if the Consultant must simulate and model the impact of tower shadowing of the antenna to the coverage, which is anticipated at the Mount Newton site.

Answer:

Yes, the Contractor must simulate and model the impact of tower shadowing of the antenna to the coverage, which is anticipated at the Mount Newton site.

g. Regarding the ERP provided at section 14.2 of the SOW, please indicate if the system must precisely provide this ERP or, if available, additional ERP can be provided. Indicate if the Contractor is responsible to evaluate the compatibility of the frequency with other users.

Answer:

Yes, the ERP value is specified and licenced by the Spectrum Office and must be no higher than indicated in the Section 14.2. It is expected that the Spectrum Office is going to licence ERP level of 26.915 W for the 1175 Douglas Street in Victoria. Each transmitter output power must be no lower than 100 Watts.

The Contractor is responsible to evaluate the compatibility of the frequency with other users when requested by the licencing Spectrum Office.

Question 19:

The Solicitation specifies that the Contractor will be responsible to program the CBSA user terminals (CLIN 9). Does the CBSA already own all the required terminals or are additional terminals needed as part of this Solicitation?

Answer 19:

The CBSA already own all the required terminals. No additional terminals need to be provided with this Solicitation.

Question 20:

If additional terminals are required, are they limited to Motorola XTS 5000, APX 6000, XTL 5000 and APX 6500? Does 100% compatible (compatibility test will be provided) terminals from other vendor can be proposed?

Answer 20:

No additional terminals are required.

Question 21:

Regarding the base stations, PWGSC stated in a previous amendment:

a. *“The Motorola base stations are the XTL5000 and the APX 6500 as indicated; please do not provide proposals for compatible base stations.”*

Answer 21: Correct.

b. It is our understanding that the XTL5000 is not a base station but a terminal,

Answer: The XTL5000 can be used as a mobile or a base/desktop terminal.

However, XTL5000 is discontinued as per Motorola Solutions website.

Answer: Correct.

c. It is our understanding that the APX 6500 is not a base station but a terminal.

Answer: The APX 6500 can be used as a mobile or a base/desktop terminal.

d. Please indicate if the GTR 8000 base station or any other equivalent is acceptable (from Motorola or other vendor). We understand that they must meet the requirements for Conventional Simulcast P-25 Phase 1 LMR.

Answer:

It is the Bidder's responsibility to select base stations that meet or exceed CBSA's requirements as stated in the Statement of Work.

Question 22:

Please confirm for the Victoria Douglas street site, that CBSA is responsible for:

a. All electrical power installations, including grounding.

Answer 22:

Yes, CBSA is responsible to provide electrical power installations, including grounding.

b. All cabling from the rack to the antenna, including materials (cable, connectors, brackets, etc)

Answer:

Yes, CBSA is responsible to install coaxial cable interconnecting indoor equipment with an outdoor antenna. Coaxial cable type: LMR-600-LLPL; coaxial cable length 220FT.

c. All antenna supporting structure installations on the rooftop

Answer:

Yes, CBSA is responsible for installing antenna supporting structure (2 inch metal pipe, 2.5 meters above the building roof).

d. All HVAC related issues.

Answer:

Yes, CBSA is responsible for all HVAC related issues.

Question 23:

Regarding the Annex C – Bid Evaluation Grid, please provide the following clarifications for the sections:

a. Hardware: please indicate if a single total number must be provided or if a breakdown of each single items required for the project must be listed, since only the site audit will provide the final project costs, especially regarding potential tower reinforcement, etc.

Answer 23:

Bidders must provide a breakdown of each single item of Hardware and Software required for each site (CLIN). The Site Audit report must reflect the prices provided as part of the Bid.

b. Labour Rates: Should a single number be provided or a break down, based on activity type (Project Engineer, Technician, Tower Climber, etc) can be provided.

Answer:

Bidders must provide a breakdown of all Labour category, Labour Rate and Labour hours proposed for each CLIN as part of their Bid. The Site Audit report must reflect the prices provided as part of the Bid.

c. Terminals: please clarify if the Bid includes terminals or not

Answer: The Bid does not include terminals.

d. In-Service Support: this section will include a one-time cost fee to set-up the system and a recurring annual fee for preventive maintenance and emergency fee rates. Please indicate if all numbers can be provided.

Answer:

Yes, all numbers must be provided and pricing proposed in accordance with Annex B and Appendix 1 to Annex B. Pricing submitted that is not in accordance with these annexes may render a bid non-valid.

Question 24:

In the event an emergency occurs, please indicate what is the required minimum response time for the landlord, of each site, in order to provide access to the Contractor so that it is compatible with the 36 hours requirements.

Answer 24:

The Landlord time is not included in the 36 hours requirements. The 36 hours' time requirements start from the site access time.

Question 25:

Please indicate if all monitoring requirements must be provided in the project constructing section or in the service support and monitoring section.

Answer 25: In the service support and monitoring section.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED