



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 886-2015**

**SUPPLY AND DELIVERY OF BATTERY BACKUP SYSTEM AND COMPONENTS  
FOR TRAFFIC SIGNAL INSTALLATIONS**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 SUPPLY AND DELIVERY OF BATTERY BACKUP SYSTEM AND COMPONENTS FOR TRAFFIC SIGNAL INSTALLATIONS

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, November 2, 2015.

B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. ENQUIRIES**

B3.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.

B3.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall promptly notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.

B3.3 If the Bidder is unsure of the meaning or intent of any provision therein, the Bidder should request clarification as to the meaning or intent prior to the Submission Deadline.

B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B3.5 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B3.6 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

### **B4. CONFIDENTIALITY**

B4.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

- (a) was known to the Bidder before receipt hereof; or
- (b) becomes publicly known other than through the Bidder; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B4.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.

## **B5. ADDENDA**

- B5.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.
- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>
- B5.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B6. SUBSTITUTES**

- B6.1 The Work is based on the materials, equipment, methods and products specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least seven (7) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the material, equipment, method or product as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
  - (c) identify any anticipated cost or time savings that may be associated with the substitute;
  - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract;
  - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B6.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and

obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.

- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B15 and E8.
- B6.9 No later claim by the Contractor for an addition to the price(s) because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.6.1, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B15.1(a).

## **B7. BID SUBMISSION**

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid; and
  - (b) Form B: Prices.
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B7.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1
- B7.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.
- B7.6 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.6.1 All Samples received will be returned to Bidder at the Bidder's expense.
- B7.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B15.1(a).
- B7.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to 204- 949-1178.

B7.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B7.9 Bids submitted by internet electronic mail (e-mail) will not be accepted.

## **B8. BID**

B8.1 The Bidder shall complete Form A: Bid, making all required entries.

B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
- (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.

B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B8.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
- (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B8.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B9.1.1 Prices on Form B: Prices shall include:

- (a) duty;
- (b) freight and cartage;
- (c) Provincial and Federal taxes [except the Goods and Services Tax (GST) and Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable] and all charges governmental or otherwise paid;
- (d) profit and all compensation which shall be due to the Contractor for the Work and all risks and contingencies connected therewith.

B9.1.2 Prices on Form B: Prices shall not include Environmental Handling Charges (EHC) or fees, which shall be extra where applicable.

B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

## **B10. DISCLOSURE**

B10.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B10.2 The Persons are:

- (a) N/A

## **B11. QUALIFICATION**

B11.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.

B11.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>

B11.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract.

B11.4 The Bidder shall submit within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B11.5 The Bidder shall supply within fifteen (15) Calendar Days of a request from the Contract Administrator two (2) sets of non-returnable wiring diagrams of the proposed enclosure (showing all contained and optional wiring connections), two (2) sets of bound hardcopies of all manuals describing all installed components, assemblies, wiring, installation, setup and maintenance procedures that would be included within the deliverables and two copies of Material Safety Data Sheets (MSDS's) for each model of energy storage product ("Battery") that would be supplied.

- B11.6 The Bidder is responsible for all freight costs associated with the delivery of any requested documentation as described in B11.4 or B11.5.
- B11.7 The Bidder may be considered as non-responsive if requested information as described in B11.4 or B11.5 is not received within the time frame specified.
- B11.8 Unsolicited samples will be returned at Bidder's expense.
- B11.9 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

## **B12. OPENING OF BIDS AND RELEASE OF INFORMATION**

- B12.1 Bids will not be opened publicly.
- B12.2 Following the Submission Deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements or evaluated prices) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>
- B12.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>
- B12.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

## **B13. IRREVOCABLE BID**

- B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.
- B13.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.

## **B14. WITHDRAWAL OF BIDS**

- B14.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B14.1.1 Notwithstanding C21, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B14.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
  - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
  - (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.

B14.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B13.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

## **B15. EVALUATION OF BIDS**

B15.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Bid Opportunity, or acceptable deviation therefrom (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B11 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B6.

B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.

B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.

B15.4 Further to B15.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

B15.5 This Contract will be awarded as a whole.

## **B16. AWARD OF CONTRACT**

B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B16.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.

B16.2.1 Without limiting the generality of B16.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
- (d) only one Bid is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

B16.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B15.

B16.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

B16.4 Notwithstanding C4 and Paragraph 6 of Form A:Bid, the City may issue a purchase order to the successful Bidder in lieu of the execution of a Contract.

**B16.5** The Contract Documents, as defined in C1.1(n)(ii), in their entirety shall be deemed to be incorporated in and to form a part of the purchase order notwithstanding that they are not necessarily attached to or accompany said purchase order.

## **PART C - GENERAL CONDITIONS**

### **C0. GENERAL CONDITIONS**

- C0.1 The *General Conditions for the Supply of Goods* (Revision 2008 05 26) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for the Supply of Goods* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](http://www.winnipeg.ca/matmgt/gen_cond.stm)
- C0.2 A reference in the Bid Opportunity to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Supply of Goods*.

## PART D - SUPPLEMENTAL CONDITIONS

### GENERAL

#### D1. GENERAL CONDITIONS

D1.1 In addition to the *General Conditions for the Supply of Goods*, these Supplemental Conditions are applicable to the Work of the Contract.

#### D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of the supply and delivery of battery backup systems for traffic signal equipment for the period from the date of award until October 1, 2016, with the option of three (3) mutually agreed upon one (1) year extensions.

D2.1.1 The City may negotiate the extension option with the Contractor within sixty (60) Calendar Days prior to the expiry date of the Contract. The City shall incur no liability to the Contractor as a result of such negotiations.

D2.1.2 Changes resulting from such negotiations shall become effective on October 1st of the respective year. Changes to the Contract shall not be implemented by the Contractor without written approval by the Contract Administrator.

D2.2 The Work shall be done on an "as required" basis during the term of the Contract.

D2.2.1 The type and quantity of Work to be performed under this Contract shall be as authorized from time to time by the Contract Administrator and/or Users.

D2.2.2 Notwithstanding C7, the City shall have no obligation under the Contract to purchase any quantity of any item in excess of its actual operational requirements.

#### D3. DEFINITIONS

D3.1 When used in this Bid Opportunity:

- (a) "**BBS**" means Battery Backup System
- (b) "**Equipment**" also means any Contractor-supplied Work component, assembly, product and / or battery
- (c) "**Normal Service**" means that the operating performance of any warranted equipment never intentionally functions in excess of the design parameters for that equipment
- (d) "**Turnkey**" means a completely assembled product that is ready for immediate use
- (e) "**UPS**" means Uninterruptible Power Supply.
- (f) "**HTTP**" means Hyper Text Transfer Protocol
- (g) "**SNMP**" means Simple Network Management Protocol
- (h) "**SNTP**" means Simple Network Time Protocol
- (i) "**TCP/IT**" means Transmission Control Protocol/Internet Protocol
- (j) "**UDP**" means User Datagram Protocol
- (k) "**SMTP**" means Simple Mail Transfer Protocol
- (l) "**LAN**" means Local Area Network
- (m) "**NEMA**" means National Electrical Manufacturers Association

#### D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:  
Jonathan Foord, E.I.T.

Signals Asset Management Engineer

Telephone No.: 204- 986-6619

email: jfoord@winnipeg.ca

#### **D5. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE**

- D5.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.
- D5.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.
- D5.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;
- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
  - (b) the Contract, all deliverables produced or developed; and
  - (c) any statement of fact or opinion regarding any aspect of the Contract.
- D5.4 A Contractor who violates any provision of D5 may be determined to be in breach of Contract.

#### **D6. NOTICES**

- D6.1 Notwithstanding C21.3, all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:
- The City of Winnipeg  
Chief Financial Officer  
Facsimile No.: 204- 949-1174
- D6.2 **Bids Submissions** must be submitted to the address in B7.5

#### **SUBMISSIONS**

#### **D7. AUTHORITY TO CARRY ON BUSINESS**

- D7.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

#### **D8. MATERIAL SAFETY DATA SHEETS**

- D8.1 With each order received, the Contractor shall include two (2) copies of Material Safety Data Sheets (MSDS's) for each model of energy storage product ("Battery") ordered.
- D8.2 This information will include factory recommended safe handling procedures for the storage, use, maintenance and disposal of each battery.
- D8.3 Throughout the term of the Contract, the Contractor shall provide the Contract Administrator with revisions or updates of the MSDS's as soon as may be reasonably possible.

## **SCHEDULE OF WORK**

### **D9. COMMENCEMENT**

- D9.1 The Contractor shall not commence any Work until he/she is in receipt of a notice of award from the City authorizing the commencement of the Work.
- D9.2 The Contractor shall not commence any Work until:
- (a) the Contract Administrator has confirmed receipt and approval of:
    - (i) evidence of authority to carry on business specified in D7; and
    - (ii) the Material Safety Data Sheets specified in B11.5.
  - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.
  - (c) a purchase order has been received from The City of Winnipeg noting quantity of material required.

### **D10. ORDERS**

- D10.1 The Contractor shall provide a local Winnipeg telephone number or a toll-free telephone number at which orders for delivery may be placed.
- D10.2 It is expected that purchase orders for not less than three (3) BBS / UPS systems will be issued.

### **D11. DELIVERY**

- D11.1 Goods shall be delivered on an "as required" basis during the term of the Contract f.o.b. destination, freight prepaid to:
- Public Works Stores Branch  
1277 Pacific Avenue  
Winnipeg, MB
- D11.2 Goods shall be delivered within sixty (60) Calendar Day(s) of the placing of an order, unless otherwise allowed by the User at the time of ordering.
- D11.3 For each purchase order for BBS / UPS systems, pallet(s) for enclosures and pallet(s) for batteries shall be supplied separately. Each enclosure and each battery must be securely palletted for shipping and subsequent storage.
- D11.3.1 Each single pallet delivered shall contain not more than four (4) enclosures.
- D11.3.2 Each single pallet delivered shall contain not more than sixteen (16) batteries.
- (a) Batteries shall be placed in a single layer on each pallet, in multiples of four (4) batteries (i.e. only 4, 8, 12 or 16 batteries per pallet).
  - (b) On the date of successful delivery, each battery delivered must display a date of manufacture within the previous twelve (12) month period.
  - (c) To ensure all batteries have been manufactured from similar materials and chemistries, all batteries delivered on each pallet must display a manufacturing date code that spans not more than 30 Calendar days.
- D11.4 The Contractor shall confirm each delivery with the Contract Administrator or his/her designate, at least two (2) Business Days before delivery.
- D11.5 Goods shall be delivered between 9:00 a.m. and 2:30 p.m. on Business Days.
- D11.6 The Contractor shall off-load goods as directed at the delivery location.

## **D12. LIQUIDATED DAMAGES**

- D12.1 If the Contractor fails to achieve delivery of the goods within the time specified in D11, the Contractor shall pay the City one hundred twenty-five dollars (\$125) per Calendar Day for each and every Calendar Day until the goods have been delivered.
- D12.2 The amount specified for liquidated damages in D12.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve delivery by the day fixed herein for same.
- D12.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **D13. RECORDS**

- D13.1 The Contractor shall keep detailed records of the goods supplied under the Contract.
- D13.2 The Contractor shall record, as a minimum, for each item listed on Form B: Prices:
- (a) user name(s) and addresses;
  - (b) order date(s);
  - (c) delivery date(s); and
  - (d) description and quantity of goods supplied.
- D13.3 The Contractor shall provide the Contract Administrator with a copy of the records for each quarter year within fifteen (15) Calendar Days of a request of the Contract Administrator.

## **MEASUREMENT AND PAYMENT**

### **D14. INVOICES**

- D14.1 Further to C10, the Contractor shall submit an invoice for each order delivered to:
- The City of Winnipeg  
Corporate Finance - Accounts Payable  
4th Floor, Administration Building, 510 Main Street  
Winnipeg MB R3B 1B9  
Facsimile No.: 204- 949-0864  
Email: [CityWpgAP@winnipeg.ca](mailto:CityWpgAP@winnipeg.ca)
- D14.2 Invoices must clearly indicate, as a minimum:
- (a) the City's purchase order number;
  - (b) date of delivery;
  - (c) delivery address;
  - (d) type and quantity of goods delivered;
  - (e) the amount payable with GST, MRST, and any applicable environmental handling charges/fees identified and shown as separate amounts; and
  - (f) the Contractor's GST registration number.
- D14.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.
- D14.4 Bids Submissions must be submitted to the address in B7.5

## **D15. PAYMENT**

- D15.1 Further to C10, payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.
- D15.2 Further to C10, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

## **D16. PURCHASING CARD**

- D16.1 The Contractor shall allow Users to charge items to their purchasing cards at no extra cost.
- D16.2 The Contractor's credit card website/gateway shall have appropriate current Payment Card Industry Data Security standards (PCI DSS) certification, (<https://www.pcisecuritystandards.org/index.shtml> ). The credit card gateway shall meet the credit card data security requirements outlined by the Payment Card Industry Security Standards Council (PCI SSC) for service providers and/or software vendors.

## **WARRANTY**

### **D17. WARRANTY**

- D17.1 Notwithstanding C11 and D17.3, the warranty period on each new battery supplied under this Contract (either as new or warranty replacement) shall begin on the date of successful delivery and shall expire six (6) years thereafter.
- D17.1.1 Any supplied battery (either in new condition or as a warranty-replaced battery or having been placed into operation in normal service) will be considered as faulty during its standard warranty period if any in-circuit conductance measurement of less than 500 Siemens has been recorded. Responsibilities of the Contractor for a warrantable battery fault (which includes immediate replacement of that battery within 10 Calendar days) is described in D17.2.
- D17.1.2 For warranty purposes, any new battery that replaced a defective battery shall be considered as being supplied within the enclosure and the warranty provided for the replacement battery shall be as stated in D17.1.
- D17.1.3 Any battery that fails as a result of physical damage attributed to unusual external forces during the warranty period shall not be considered as a warrantable fault.
- D17.2 The Contractor shall be responsible for all transportation and service charges to replace any defective BBS/UPS battery supplied under this Contract that fail to operate properly in normal service within the warranty period (as stated in D17.1).
- D17.3 Notwithstanding C11 and D17.1, the warranty period for each component or assembly supplied under this Contract (either as new being part of each Work component and/or assembly or as a warranty replacement) shall begin on the date of successful delivery and shall expire five (5) years thereafter unless extended pursuant to C11.3, in which case it shall expire when provided for thereunder.
- D17.3.1 For warranty purposes, equipment that replaces defective equipment shall be considered as being supplied within the enclosure and the warranty provided for the replacement equipment shall be as stated in D17.3.
- D17.4 The Contractor shall be responsible for all transportation and service charges to repair and / or replace all other defective BBS/UPS system component or assembly (excluding batteries – see D17.1) supplied under this Contract that fail to operate properly in normal service within the five (5) year warranty period (as specified in D17.3).

- D17.5 Within five (5) business days of the City notifying the Contractor of any component, assembly and / or battery malfunction, the Contractor shall issue a Return Material Authorization (RMA) and return shipping instructions for the defective component, assembly and / or battery.
- D17.6 Within five (5) business days of the RMA being issued by the Contractor, the Contractor shall arrange for express delivery (within five calendar days) of the replacement for the defective component, assembly and / or battery. The replacement component, assembly and / or battery shall be shipped to the City (to a specified address) where it may be tested, and will then be placed into service.
- D17.7 Within thirty (30) Calendar days of replacement equipment being delivered, defective equipment shall be returned according to Contractor's instructions at the Contractor's expense.

## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS

E1.1 These Specifications shall apply to the Work.

E1.2 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
UPS-2015	<i>UPS PEDESTAL ADAPTOR</i>

#### E2. GOODS

E2.1 The Contractor shall supply and deliver each battery backup system / uninterruptible power supply (BBS / UPS) for traffic signal equipment in accordance with the requirements hereinafter specified.

E2.2 **Item No. 1: Turnkey BBS/UPS System** – capable of operation in normal service as described in Section E3. Each system contains:

E2.2.1 DC-to-AC Inverter (48 VDC input, 120 VAC pure sine-wave output) rated at 1100 VA (minimum), with user-configurable Ethernet communications capability and with standard terminal block Input, standard terminal block Output & 5-15R Output, with built-in battery-string charge capability.

E2.2.2 EIA rack mount kit for DC-to-AC Inverter (as described above)

E2.2.3 Universal Automatic Transfer Switch, includes EIA rack mount

E2.2.4 Battery String Harness Kit

(a) The battery string harness may incorporate wiring to the connector used by the Battery String Charge Balancer.

(b) A battery string harness kit that provides in-line fused protection of the full battery string and charge balancer is desirable. If supplied, the replaceable inline-fuse should be rated at 100 Amperes, and a spare 100 Ampere in-line fuse shall be provided as well. A ruptured fuse shall not cause harm to any connected circuitry.

E2.2.5 Four (4) 12 Volt, BCI Group Size 31, AGM Style, Gel Electrolyte, Valve Regulated Lead Acid (VRLA) batteries, rated at 109Ah (20 Hour rate).

(a) Each new battery delivered as part of an order must display a manufacturer's Serial Number and (on date of successful delivery) must display a date of manufacture within the previous twelve (12) month period.

(b) For each order of new batteries delivered on a pallet (as noted in D11.3.2) all batteries delivered must display a manufacturing date code that spans not more than thirty (30) Calendar Days.

E2.2.6 Battery String Charge Balancer (as described in E4).

E2.2.7 Battery Heater System (as described in E4).

E2.2.8 Battery Temperature Sensor (as described in E4).

E2.2.9 Battery Spacer Clip(s), as required (as described in E4).

- E2.2.10 An Outdoor Enclosure pre-wired and able to contain all components and batteries as listed in E2.2.1 to E2.2.9. Each enclosure must include a single door with three-point latching mechanism, a Corbin Type 2 door-mounted lock and two (2) keys, a thermostatically controlled exhaust fan, a "On Battery" Indicator light, a Door Open switch, a Tamper switch and a Tilt switch.
- (a) Each enclosure shall consist of a minimum thickness of 0.125" traffic grade 5052 H32 aluminum. All welds should be inside the enclosure when possible and shall have a total height of no more than 52".
  - (b) All enclosure hardware shall be stainless steel.
  - (c) Each enclosure shall be mountable to the City of Winnipeg's UPS adaptor pedestal as described in drawing UPS-2015.
  - (d) Enclosure door must include louvered vents and slots with attached re-usable air filter.
  - (e) Enclosure shall consist of a minimum NEMA 3R rating.
  - (f) Wiring to the Door Open, Tamper and Tilt switches must not be connected to any other circuit within the enclosure.
  - (g) The Door Open switch function and the Tamper switch function may be provided within the same switch body, as long as electrical isolation occurs between the switched circuits.
  - (h) The Door Open Switch and the Tamper Switch must individually provide a NC (normally closed) contact closure when the enclosure door has opened. Contacts on each switched circuit must be rated for 120 VAC operation, and capable of switching either an AC or DC load from 5 milliamperes to 2 Amperes. The Door Open switch contacts may be wired by the customer to a customer-supplied internal cabinet light located in the enclosure. The Tamper switch contacts may be wired by the customer to function as a 'homing' control for a nearby PTZ camera, which has been user-programmed to swing and focus on the mounted enclosure to capture any activity around the enclosure when the door is opened.
  - (i) The Tilt Switch shall be designed to provide a contact closure only when the enclosure no longer maintains a vertical orientation (i.e. when sensing a shift of the enclosure of more than +/- 5 degrees off vertical). This switch will be wired by the customer to customer supplied and installed equipment.
- E2.2.11 Each turnkey system supplied must include two (2) hard-copies of manuals, two (2) MSDS for batteries and two (2) large format drawings of the cabinet / enclosure wiring diagram that clearly identifies the electrical connections to each component. The wiring diagram may show electrical connections to any optional equipment that would provide enhanced features and functionality beyond the design requirements as specified in Section E3.
- E2.2.12 For each enclosure ordered, a set of four (4) user-applied self-adhesive weather resistant labels shall be supplied. These individual labels shall each display a unique number, from 1 to 4, which will be applied by the user to identify each of the four batteries that are user-installed in each enclosure.

### **E2.3 Item No. 2: Battery Tray Shelf Extensions**

- E2.3.1 The battery shelf extension provides a temporary support for the purpose of installing / maintaining / removing batteries used in the enclosure described in E2.2.10.

### **E3. BATTERY BACKUP SYSTEM DESIGN**

- E3.1 Each BBS /UPS systems incorporates approved products (as described in E4.1) that are pre-configured into a suitable enclosure as a turnkey system. Manufacturer's documentation for the turnkey system must be included with each component and assembly delivered that (at minimum) describes the approved products that are contained within the enclosure. Documentation must include wiring diagrams, installation instructions, maintenance procedures, MSDS's for batteries and full-colour images of the finished product, and should include

manufacturer's recommended system settings to attain the performance in normal service as described in E3.2.

E3.2 In normal service, each supplied Battery Backup System must meet or exceed the following performance requirements:

- (a) Designed to supply up to 9 amperes of pure sine-wave power to 120 VAC, 60 Hz equipment.
- (b) Operates as wide-range Automatic Voltage Regulator during brown-out voltage conditions.
- (c) Uses a single string of four (4) series-connected rechargeable AGM VRLA gel electrolyte lead-acid high capacity secondary batteries for reserve power storage.
- (d) Generates electric power from battery backup during periods of primary power interruption or black-out periods (where input mains voltage was sensed lower than 85 VAC or higher than 175 VAC).
- (e) Provides multiple user-programmable relay outputs for controlling, external monitoring and tracking inverter functions and UPS events.
- (f) Allow the configuration of scheduled settings for startup, shutdown and self-test functions.
- (g) Provide remote web based monitoring and management through a web browser such as Microsoft Internet Explorer.
- (h) Logs multiple events all with date/time stamping.
- (i) Allows remote access to inverter functions through Ethernet communications port.
- (j) Use network protocols, TCP/IP, UDP, SNMP, SNTP, HTTP, and SMTP.
- (k) Use password protection for administration and system operation.
- (l) Provide Email notifications of power events to multiple hosts.
- (m) Provide firmware upgrading thru fail safe network.
- (n) Provide IP and hardware reset buttons.
- (o) Provide a LAN Interface with auto-sense of minimum 10/100Mbps Ethernet.
- (p) Charges the secondary batteries used in each BBS / UPS system to full recovery (100%) of initial capacity within eight (8) hours of primary electrical service being restored.
- (q) Enclosure must be supplied with a thermostat controlled 48VDC fan rated at 100 cfm (or better), ON at 49 deg C, OFF at 32 deg C.
- (r) Includes a separate, externally-mountable and environmentally appropriate "On Battery" indicator light.
- (s) Enclosure is provided with a Door Open switch, a Tamper Switch and a Tilt Switch (wiring to all switches shall be separately identified and terminated).
- (t) Two (2) sets of manuals must be provided with each enclosure (see E2.2.11).
- (u) Two (2) large format wiring diagrams must be provided with each enclosure.
- (v) Warranty (as described in D17) applies to each individual component or assembly.

#### **OPERATIONAL REQUIREMENTS**

E3.3 Immediately following a primary power electrical service outage, the BBS / UPS system must quickly and automatically provide uninterrupted sinusoidal waveform backup electrical AC power to a typical traffic signalized intersection that allows it to continue to fully sequence all traffic signal displays for not less than two (2) hours AND then allows it to continue to provide electric power to the same intersection for not less than two (2) additional hours in failsafe FLASH mode, when operating at an ambient temperature of -30 degrees Celsius.

- (a) A typical operating traffic signalized intersection load consists of a standard Model 332B cabinet (containing a Model 170E Controller, 24 volt cabinet Power Supply, cabinet ventilation fan and conflict monitor), twelve (12) standard field mounted vehicular traffic signal heads (three 12" LED display modules per head) and eight (8) standard field

mounted pedestrian signal heads (single BiModal LED display module per head). The peak operating design energy load in normal service is 400 watts per hour.

- (b) A typical flashing traffic signalized intersection load consists of a standard Model 332B cabinet (containing a Model 170E Controller, 24 volt Cabinet Power Supply, cabinet ventilation fan and conflict monitor) and twelve (12) flashing RED vehicular traffic signal displays (duty cycle of 50% ON, 50% OFF). The peak flashing design energy load in normal service is 250 watts per hour.
- E3.4 Following any application or restoration of primary power following a black-out period (where input mains voltage was sensed lower than 85 VAC or higher than 175 VAC), the BBS / UPS system must initially establish that the primary power source is stable and then return to normal operation providing automatic voltage regulation (AVR) functionality to power the traffic signalized equipment operating at the intersection.
- E3.5 The BBS / UPS system must be capable of fast-recharging the depleted secondary batteries to 95% (or greater) of original capacity within a four (4) hour period and must continue to recharge secondary batteries to 100% of original capacity within an eight (8) hour period.

#### **E4. APPROVED PRODUCTS**

- E4.1 When supplied within the turnkey system (as described as Component, assembly and / or battery), the following products are approved:
- (a) For Inverter: Alpha PN 017-230-37
  - (b) For Universal Automatic Transfer Switch: Alpha PN 020-168-27
  - (c) For Battery Harness Kit: Alpha PN 740-678-22
  - (d) For Battery Cable Kit: Alpha Battery Cable Kit
  - (e) For Battery: Alpha PN 181-233-10 220 Gold-HP AGM Gel Battery
  - (f) For Charge Balancer: Alpha PN 012-306-21 48 V Battery Balancer with wiring harness
  - (g) For Battery Heater System: Alpha PN 189-236-10
  - (h) For Battery Temperature Sensor: Alpha PN 747-095-20-72
  - (i) For Battery Spacer Clip: Alpha PN 189-084-19
  - (j) For BBS Outdoor Enclosure: Alpha SE 48-1616
  - (k) For Communication Module: Alpha PN 740-730-22

#### **E5. BATTERY TESTING AND INITIAL CONDUCTANCE MEASUREMENT**

- E5.1 The following in-circuit testing will be done on each new and fully-charged battery prior to commissioning on-site:
- (a) A single battery string consisting of four (4) new batteries will be properly connected to the host UPS power module and battery string charge balancer.
  - (b) Uninterrupted AC line power will be supplied to the system for a minimum 24 hour period, during which time no load will be present on the UPS power module output circuit. The UPS power module will fully charge the new battery string over this initialization period, and will continue to hold the battery string at a float charge state during the testing phase. Any battery connected to a UPS power module operating under float charge conditions will be considered to be fully charged.
  - (c) Using a Midtronics Celltron tester (a device that measures the conductance / admittance of each battery), measurements shall be taken and recorded for each fully charged new battery in the string. A minimum of three (3) conductance measurements will be recorded for each fully charged battery, and **the lowest value recorded for each battery will be considered as the fully charged battery Conductance value.**

**NOTE:** For the battery identified in E4.1(e), the manufacturer's published new battery Conductance value is 960 to 1400 (Siemens). If other batteries are approved as substitutes by the Contract Administrator, other conductance values may need to be considered.

- (d) For any recorded initial Conductance reading of less than 90% of the lowest-stated new battery rating, that new battery will be considered as faulty (defective) and the Contractor will be advised that the new and fully charged battery under test will require immediate replacement as described in D17.

E5.2 Individual batteries that pass the testing as described in E5 will be user-labelled with date-of-test and initial Conductance reading details, and will be considered "In-Service" as of that date.

## **E6. PRODUCT SUPPORT**

E6.1 Unless noted separately, the Contractor shall provide no-charge technical support to City of Winnipeg maintenance personnel for all components, assemblies and / or batteries supplied under this Contract and for firmware upgrades for the supplied equipment throughout the full Warranty period.

E6.2 No-charge technical support may also be provided by the BBS/UPS equipment manufacturer.

E6.3 Throughout the Warranty period of any component, assembly and / or battery supplied under this Contract, there shall be no charges levied against the City for any technical support services provided or guidance received.

## **E7. PERFORMANCE RELIABILITY**

E7.1 The responsibility for the design of each BBS / UPS system component, sub-assembly or assembly and performance reliability throughout the Warranty period shall rest upon the Contractor.

E7.2 The term "*repeat failures*" as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the unit inoperative, or required repeated shop correction, service and/or replacement during the warranty period applicable for said component, subassembly, or assembly. Minor assembly or regular service adjustments are not included, or considered under the scope of "repeated failures", as well as other factors, such as operational damage due to accidents, misuse or lack of proper maintenance and service attention by not following the manufacturer's preventative maintenance schedules.

E7.3 Where any piece of equipment develops "repeated failures" in service, the Contractor shall investigate the reasons for these failures. The Contractor shall describe and review any proposed remedial adjustments with the Contract Administrator (or designate). As stated in E8, approval for any remedial works shall be issued by the Contract Administrator prior to effecting any equipment changes (including repairs, alterations, modifications or re-programming of existing equipment) in order to guarantee reliability of performance.

## **E8. EQUIPMENT SUBSTITUTION AND EQUIPMENT CHANGES**

E8.1 Any Contractor-initiated request to propose major changes to approved equipment supplied under this contract shall be reviewed by the Contract Administrator (or designate) to determine if the changed product remains suitable for use.

- (a) Contractors are reminded that requests for review and approval of Substitutes as an equal or an alternative to any equipment listed in E4.1 shall be made in accordance with E3.1.

E8.2 Substitutes to the Approved Product list will only be considered as equal if the request for consideration includes technical information for that piece of equipment that provides performance at a temperatures of -30, zero (0) and +25 degrees Celsius.

- E8.3 Any request for substitution of the assembled work Component, assembly and / or battery shall include a technical report of a complete BBS / UPS system (including enclosure) that equals or exceeds the warranty requirements (described in D17) and full system design details (described in E3) for AC line-powered and battery operation at -30 degrees Celsius.
- E8.4 Two sets of technical information and large format wiring diagrams of the complete BBS / UPS system and all associated components must accompany that request.
- E8.5 A temperature chart must be included in the documentation sent for review for any different battery style proposed that shows expected battery performance throughout an operating temperature range of -35 degrees Celsius to +60 degrees Celsius.
- (a) MSDS shall be provided for any different battery style proposed.
  - (b) If other batteries are approved by the Contract Administrator, other conductance values will need to be substituted when subjecting each battery to testing as described in E5.
- E8.6 If any equipment substitute is approved, all future equipment supplied (or any replacement equipment supplied) under this Contract shall be either originally listed or approved as substitute on all work component, assembly and / or batteries.