

THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 359-2015

SMART WIRELESS PNEUMATIC THERMOSTATS WITH BACNET/IP INTEGRATION

TABLE OF CONTENTS

PARTA	- BID SUBMISSION	
	n A: Bid n B: Prices	1 3
PART B	- BIDDING PROCEDURES	
B2. B3. B4. B5. B6. B7. B8. B9. B10. B11. B12. B13. B14.	Contract Title Submission Deadline Enquiries Confidentiality Addenda Substitutes Bid Submission Bid Prices Disclosure Qualification Opening of Bids and Release of Information Irrevocable Bid Withdrawal of Bids Evaluation of Bids Award of Contract	1 1 1 1 1 2 3 3 4 5 5 5 6 6 6
PART C	- GENERAL CONDITIONS	
C0.	General Conditions	1
PART D	- SUPPLEMENTAL CONDITIONS	
D2. D3. D4. D5.	General Conditions Scope of Work Definitions Contract Administrator Ownership of Information, Confidentiality and Non Disclosure Notices	1 1 1 1 1
	missions Authority to Carry on Business	2
Sche D8. D9. D10.	edule of Work Commencement Delivery Liquidated Damages	2 2 2
D11. D12. D13.	surement and Payment Invoices Payment Payment Payment Schedule	3 3
	ranty . Warranty	3
PART E	- SPECIFICATIONS	
Gen e E1.	eral Goods	1

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 SMART WIRELESS PNEUMATIC THERMOSTATS WITH BACNET/IP INTEGRATION

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, May 11, 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.
- 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 B7.7, 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:
 - (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 in ink, 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.
- B7.7 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;
 - (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.
- B8.4.2 All signatures shall be original.
- 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/matmqt/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; and
 - (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba);
- 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, including:
 - (a) Wireless Pneumatic Thermostat BACnet Gateway PICS Document.

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.
- B15.4.1 Further to B15.1(a), in the event that a unit price is not provided on Form B: Prices, the City may determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.
- 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

CO. 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
- 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 supply and delivery of smart wireless pneumatic thermostats with BACNet/IP integration and associate components.
- D2.2 Deliver Technical support by e-mail, live support software, website, or phone, two calendar years after purchase.

D3. DEFINITIONS

- D3.1 When used in this Bid Opportunity:
 - (a) "PICS" means BACnet Protocol Implementation Conformance Statement;
 - (b) "BACnet" means Building Automation and Control Networks.

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Clinton Langan Building Systems Technologist Telephone No.: 204-471-0679

Email: Clangan@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.

SCHEDULE OF WORK

D8. COMMENCEMENT

- D8.1 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.
- D8.2 The Contractor shall not commence any Work until:
 - (a) the Contract Administrator has confirmed receipt and approval of:
 - evidence of authority to carry on business specified in D7;
 - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.

D9. DELIVERY

D9.1 Goods shall be delivered within forty-five (45) Calendar Day(s) of the award of Contract, f.o.b. destination, freight prepaid to:

Building System Technologies

510 Main Street (Basement), Winnipeg, Manitoba, R3B-1B9

- D9.2 The Contractor shall confirm each delivery with the Contract Administrator or his/her designate, at least two (2) Business Days before delivery.
- D9.3 Goods shall be delivered between 9:30 a.m. and 2:30 p.m. on Business Days.
- D9.4 The Contractor shall off-load Goods as directed at the delivery location.

D10. LIQUIDATED DAMAGES

- D10.1 If the Contractor fails to achieve delivery of the Goods within the time specified in D9.1 Delivery the Contractor shall pay the City seventy fire dollars (\$75) per Calendar Day for each and every Calendar Day until the Goods have been delivered.
- D10.2 The amount specified for liquidated damages in D10.1 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.
- D10.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

MEASUREMENT AND PAYMENT

D11. INVOICES

D11.1 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

- D11.2 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.
- D11.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.
- D11.4 Bids Submissions must be submitted to the address in B7.5.

D12. PAYMENT

D12.1 Further to C10, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

D13. PAYMENT SCHEDULE

D13.1 Further to C10, payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.

WARRANTY

D14. WARRANTY

- D14.1 Notwithstanding C11, the warranty period shall begin on the date of successful delivery and shall expire two (2) Calendar years thereafter unless extended pursuant to C11.3, in which case it shall expire when provided for thereunder.
- D14.2 The Contractor shall be responsible for all transportation and service charges to repair and/or replace defective equipment supplied under this Contract that fail to operate properly in normal service with the two (2) year warranty period (as specified above).

PART E - SPECIFICATIONS

GENERAL

E1. GOODS

- E1.1 The Contractor shall supply and deliver smart wireless pneumatic thermostats in accordance with the requirements hereinafter specified.
- E1.2 Item No. 1 Wireless Pneumatic Thermostat (WPT) shall:
 - (a) Action: Direct and/or reverse acting;
 - (b) Number of Pipes: Single and/or dual pipe;
 - (c) Bimetal strip that provides continuous temperature response and regulation of control air for smooth actuation;
 - (d) Setpoint Temperature Range: 13°C to 30°C;
 - (e) Air connections: 3/32" ID tube fittings;
 - (f) Max pipe operating pressure: 25 psi;
 - (g) Airflow usage: 0.011 scfm;
 - (h) Sensitivity: Factory adjusted to 2.0 − 2.5 psi/C;
 - (i) Operating frequency band: 2.4 GHz ISM Band;
 - (i) Batteries:
 - (i) Requires CR123 lithium batteries
 - (ii) Battery Life: Two years or more (with 4 setpoint changes per day)
 - (iii) Must have at least five reference sites of 100 or more thermostats that are at least two years old to demonstrate battery life
 - (iv) Fail safe: thermostat must hold the occupied temperature in event of a battery failure;
 - (k) Operating Conditions: 0°C to 50°C, 95% RH Maximum, Noncondensing;
 - (I) Functional capabilities include:
 - (i) Programmable schedules;
 - (ii) Programmable occupied and unoccupied setpoints;
 - (iii) Remote monitoring of branch pressure;
 - (iv) Remote monitoring of space temperature;
 - (v) Remote control and monitoring of setpoint;
 - (vi) Remote indication of low battery life;
 - (vii) Capable of self-calibration;
 - (viii) Occupancy override for up to four hours, including event notification and logging;
 - (m) Deadband option to include the following additional features:
 - (i) Deadband Pressure: User adjustable, default 8 psig ± 1 psig;
 - (ii) Deadband Range: 0°C (no deadband) to 11°C;
- E1.3 Item No. 2 Wireless Wall Powered Repeater shall:
 - (a) Support up to 15 thermostats;
 - (b) Power Requirements: 3.3V DC, 3W (powered by DC adapter) OR 24VAC, 5VA;
 - (c) Antenna: External rubber dipole, 4dBi gain, omni-directional, 2.4 to 2.5 GHz;
 - (d) Operating frequency band: 2.4 GHz ISM Band;
 - (e) Operating Conditions: 0°C to 50°C, 95% RH Maximum, Noncondensing.

E1.4 Item No. 3 - Supervisory Controller shall be:

- (a) Designed to support up to 14 repeaters and 225 thermostats;
- (b) User Interface: Built-in web pages for web browser access to data, alarming and trending;
- (c) Ability to use as a stand-alone system or as an integrated part of an existing building automation system;
- (d) Available Data Protocols: BACnet/IP via building Ethernet LAN and OpenADR;
- (e) Allows user-assignable BACnet Device Identifier for each WPT;
- (f) Will only require one BACnet Device Identifier per thermostat for integration with third-party automation systems.
- (g) BACnet Objects (grouped under the BACnet Device Identifier) will be consistent from one WPT to another;
- (h) Include a commissioning diagnostics tool that verifies the overall health of the WPT system. The tool must verify the following:
 - (i) Wireless communication success rates and RSSI;
 - (ii) Calibration of thermostats;
 - (iii) Compressed air;
 - (iv) Counts of equipment;
 - (v) Node IDs (all IDs are commissioned, online and no duplicate IDs);
 - (vi) Firmware and software versions are compatible:
- (i) Capable of responding to Auto-Demand Response signals from utilities;
- (j) Mobile Access: Alarm notification via e-mail or SMS text message from cell phone and PDA;
- (k) Power Supply: 100-240VAC, 1.6A, 50-60Hz;
- (I) Humidity: 10% 90% non-condensing;
- (m) Operating Temperature: 0°C 45°C;
- (n) Vibration Endurance: 1 Grms (5-500 Hz; X, Y, Z directions);
- (o) Functional capabilities include:
 - (i) Programs WPT schedules;
 - (ii) Programs WPT occupied and unoccupied setpoints;
 - (iii) Reports branch pressures from WPTs;
 - (iv) Reports space temperature from WPTs;
 - (v) Reports WPT setpoints;
 - (vi) Issues setpoint commands to WPTs;
 - (vii) Provides low battery life alarms for WPTs;
 - (viii) Logs occupancy overrides.

E1.5 Item No. 4 - Wireless USB Hub shall be:

- a. Antenna: External rubber dipole, 4dBi gain, omni-directional, 2.4 to 2.5 GHz;
- b. Operating frequency band: 2.4 GHz ISM Band;
- Operating Conditions: 0°C to 50°C, 95% RH Maximum, Noncondensing;
- d. Powered by USB connection to Controller.

E1.6 Item No. 5 - Wireless Range Tester Kit shall be:

a. DC Power: Receiver: 2 x CR123, 3V, 1500 mAH batteries, Transmitter: 2 x CR123, 3V, 1500 mAH batteries;

- b. Antenna: Receiver: External Rubber Dipole, 4dBi gain, omni-directional, 2.4 to 2.5 GHz, Transmitter: Internal PCB Antenna, 2dBi gain, omni-directional, 2.4 to 2.5 GHz;
- c. Operating Frequency: 2.4 GHz ISM Band.

E1.7 Item No. 6 - IP65 Enclosure shall be:

- (a) Dust tight: no ingress of dust and complete protection against contact;
- (b) Dimensions: 84mm x 234mm x 148mm.

E1.8 Item No. 7- Ethernet Router shall be:

- (a) Ports: 1 x 2 position detachable screw terminal, Leased Line, 1 x RJ-11C, 600 bits/s to 33.6 kbit/s, PSTN, 4 x RJ-45, 10 Mbit/s, 100 Mbit/s, Ethernet TX;
- (b) PSTN compliance: ETSI TS103 021-1, ETSI TS103 021-2, ETSI TS103 021-3;
- (c) Interface specifications, power:

1.	Rated voltage	12 to 48 VDC
П.	Operating voltage	10 to 60 VDC
111.	Rated current	370 mA @ 12 VDC 190 mA @ 24 VDC 110 mA @ 48 VDC
IV.	Rated frequency	DC
V.	Inrush current	1.1 A2s
VI.	Startup current	1.1 A
VII.	Polarity	Reverse polarity protected
VIII.	Redundant power input	Yes
IX.	Isolation to	Ethernet and PSTN
X.	Connection	Detachable screw terminal
XI.	Connector size	0.2 – 2.5 mm2 (AWG 24 – 12)
XII.	Shielded cable	Not required

(d) Interface specifications, 10/100BaseTX:

1.	Electrical specification	IEEE std 802.3. 2000 Edition
11.	Data rate	10 Mbit/s, 100 Mbit/s, manual or auto. IEEE 802.3 2000 edition.
Ш.	Duplex	Full or half, manual or auto
IV.	Transmission range	100 m
V.	Isolation to	Power, RS-232 and RS-422
VI.	Connection	RJ-45
VII.	Shielded cable	Shielded cable is required if unit is used in harsh environment
VIII.	Number of ports	4

(e) Public Switched Telephone Network (PSTN):

I.	Electrical specification	Public Switched Telephone Network
11.	Data rate	600 bit/s to 33.6 kbit/s
111.	Protocol	Bell103, Bell212, V.21, V.22, V.22Bis, V.23C, V.32, V.32Bis, V.34
IV.	Protection	Installation Fault Tolerant (up to ±60 V)
V.	Connection	RJ-11C
VI.	Shielded cable	Not required