



THE CITY OF WINNIPEG

REQUEST FOR PROPOSAL

RFP NO. 1009-2016

REQUEST FOR PROPOSAL FOR WASTEWATER REPORTING SOLUTION

TABLE OF CONTENTS

PART A - PROPOSAL SUBMISSION

Form A: Proposal	1
Form B: Prices	4

PART B - BIDDING PROCEDURES

B1. Contract Title	1
B2. Submission Deadline	1
B3. Enquiries	1
B4. Confidentiality	1
B5. Addenda	2
B6. Substitutes	2
B7. Proposal Submission	3
B8. Proposal	4
B9. Prices	4
B10. Form N: Mandatory Requirements	5
B11. Experience of Proponent	5
B12. Implementation	5
B13. Training and Support	6
B14. Historical Data Access	6
B15. Business Requirements	6
B16. Technical and Non-Functional Requirements	6
B17. Disclosure	6
B18. Qualification	7
B19. Opening of Proposals and Release of Information	7
B20. Irrevocable Offer	8
B21. Withdrawal of Offers	8
B22. Interviews	8
B23. Negotiations	8
B24. Evaluation of Proposals	9
B25. Award of Contract	9

PART C - GENERAL CONDITIONS

C0. General Conditions	1
------------------------	---

PART D - SUPPLEMENTAL CONDITIONS

General

D1. General Conditions	1
D2. Background information	1
D3. Project Objectives	2
D4. Scope of Work	2
D5. Definitions	2
D6. Contract Administrator	4
D7. Ownership of Information, Confidentiality and Non Disclosure	4
D8. Notices	4

Submissions

D9. Authority to Carry on Business	4
D10. Insurance	4

Control of Work

D11. Commencement	5
D12. Orders	5
D13. Records	5

Measurement and Payment

D14. Invoices	6
D15. Payment	6

D16. Payment Schedule	6
Warranty	
D17. Warranty	7
PART E - SPECIFICATIONS	
General	
E1. Applicable Specifications and Drawings	1
E2. Project Deliverables	1
E3. Solution Vision	2
E4. Mandatory Requirements	3
E5. Business Requirements	4
E6. Technical and Nonfunctional Requirements	9
E7. Hosting in canada	11
PART F - SECURITY CLEARANCE	
F1. Security Clearance	1

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 REQUEST FOR PROPOSAL FOR WASTEWATER REPORTING SOLUTION

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, May 5, 2017.

B2.2 Proposals 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 D6.1.

B3.2 If the Proponent finds errors, discrepancies or omissions in the Request for Proposal, or is unsure of the meaning or intent of any provision therein, the Proponent 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 Proponent is unsure of the meaning or intent of any provision therein, the Proponent 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 Request for Proposal will be provided by the Contract Administrator to all Proponents 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 Request for Proposal will be provided by the Contract Administrator only to the Proponent who made the enquiry.

B3.6 All correspondence or contact by Proponents with the City in respect of this RFP must be directly and only with the Contract Administrator. Failure to restrict correspondence and contact to the Contract Administrator may result in the rejection of the Proponents Proposal Submission.

B3.7 The Proponent 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 Proponent by the City or acquired by a Proponent 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 Proponent before receipt hereof; or
- (b) becomes publicly known other than through the Proponent; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B4.2 The Proponent 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 Request for Proposal, 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 Proponent 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 Proponent shall acknowledge receipt of each addendum in Paragraph 9 of Form A: Proposal. Failure to acknowledge receipt of an addendum may render a Proposal non-responsive.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Request for Proposal.
- 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 five (5) Business Days prior to the Submission Deadline.
- B6.4 The Proponent 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 Plant, Material or method 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 Proponent 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 Proponents. The Proponent 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 Proponent 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 Proponent 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 B24.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B7. PROPOSAL SUBMISSION

- B7.1 The Proposal shall consist of the following components:
- (a) Form A: Proposal;
 - (b) Form B: Prices; and
 - (c) Form N: Mandatory Requirements.
- B7.2 The Proposal should also consist of the following components:
- (a) Form N: Experience of Proponent;
 - (b) Form N: Implementation;
 - (c) Form N: Training and Support;
 - (d) Form N: Historical Data Access;
 - (e) Form N: Business Requirements; and
 - (f) Form N: Technical and Non-Functional Requirements.
- B7.3 Further to B7.1, if a Proponent wishes to submit Proposals for both Alternative 1 and Alternative 2, the Proposal for each Alternative should be submitted separately.
- B7.4 Further to B7.1 all components of the Proposal shall be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely.
- B7.5 Further to B7.2, all components of the Proposal should be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely.
- B7.6 Proponents should submit one (1) unbound 8.5” x 11” original (marked “original”) including drawings and seven (7) copies (copies can be in any size format) for sections identified in B7.1
- B7.7 Proposal format, including type of binding, number of pages, size of pages and, font, etc., will not be regulated, except that the Proposal should contain a table of contents, page numbering and should be in the Sections identified above. Proponents are encouraged to use their creativity to submit a Proposal which provides the requested information for evaluation and other information which illustrates the strength of their team.
- B7.8 Proponents are advised that inclusion of terms and conditions inconsistent with the Request for Proposal, will be evaluated in accordance with B24.1(a).
- B7.9 The Proposal shall be submitted enclosed and sealed in an envelope/package clearly marked with the RFP number and the Proponent’s name and address.

B7.10 Proposals submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B7.11 Proposals shall be submitted to:

The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B7.12 Any cost or expense incurred by the Proponent that is associated with the preparation of the Proposal shall be borne solely by the Proponent.

B8. PROPOSAL

B8.1 The Proponent shall complete Form A: Proposal, making all required entries.

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

- (a) if the Proponent is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
- (b) if the Proponent is a partnership, the full name of the partnership shall be inserted;
- (c) if the Proponent is a corporation, the full name of the corporation shall be inserted;
- (d) if the Proponent 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 Proposal 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: Proposal, the Proponent shall identify a contact person who is authorized to represent the Proponent for purposes of the Proposal.

B8.4 Paragraph 11 of Form A: Proposal shall be signed in accordance with the following requirements:

- (a) if the Proponent is a sole proprietor carrying on business in his/her own name, it shall be signed by the Proponent;
- (b) if the Proponent is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Proponent 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 Proponent 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: Proposal should be printed below such signatures.

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

B9. PRICES

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

- B9.1.1 Notwithstanding C10.1.3, prices on Form B: Prices shall not include the Goods and Services Tax (GST) or Manitoba Retail Sales Tax (MRST, also known as PST), 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 Proposals.
- 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.
- B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10. FORM N: MANDATORY REQUIREMENTS

- B10.1 Proponent shall complete and submit Form: Mandatory Requirements. The solution must meet the requirements listed in E4.

THE RESPONSES TO THE REQUIREMENTS LISTED IN B11, B12, B13, B14, B15 and B16 ARE TO BE SUBMITTED ON FORM N: REQUIREMENTS AND SPECIFICATIONS

B11. EXPERIENCE OF PROPONENT

- B11.1 The Proponent should submit information in sufficient detail for the City to evaluate the qualifications of the Proponent by providing the items listed below. Include any additional information regarding your experience that may be of interest to the City of Winnipeg.
- (a) Brief overview of your organization, company history, professional services offered, markets serviced and customer base;
 - (b) Details of your organization and management structure;
 - (c) The number of municipal government contracts similar in size and scope;
 - (d) The details of the scope, complexity and value of each contract;
 - (e) Three (3) references for recent projects similar in size and scope. Each reference should consist of a company name, contact name, email address, phone number, and a brief description of the project. At least one reference must be for a water or wastewater contract as a mandatory requirement in accordance with E4.1

B12. IMPLEMENTATION

- B12.1 Provide your specific project approach for installation of the application and a detailed project plan. Indicate expectations for skills, roles, and responsibilities for City of Winnipeg and Proponent resources. Include planning for testing and go-live approach. Methodology should be presented in accordance with the Scope of Services identified in D4. Include any additional information regarding implementation that may be of interest to the City of Winnipeg.
- (a) Project Plan: Provide details of the project team, project team qualifications, timeline/schedule including duration and effort, project assumptions and constraints, expected deliverables and milestones for each phase, a description of the risk management procedures and approach, a description of the issue management procedures and approach, and a description of the change management procedures and approach.
 - (b) Effort and Staff Skills: Provide details of the amount of time and type of staff that the City of Winnipeg will need to provide for each of the following project phases: defining the project plan, installation, design and specification, solution configuration, data migration, testing, go-live and end user training.

- (c) Testing: Provide information about your overall approach to testing and validating the solution. Include all relevant testing phases such as system testing, integration testing, User Acceptance Testing (UAT), performance/load testing, etc.
- (d) Go-Live Approach: Describe your recommended roll out strategy e.g. big bang, parallel processing, location based, etc. Describe your recommendations for go-live support including onsite resources, duration, roles and responsibilities for City of Winnipeg staff, final cut-over, rollback strategy, etc.

B13. TRAINING AND SUPPORT

- B13.1 Explain your training methodology and approach, including all relevant information regarding knowledge transfer to City of Winnipeg staff. Ensure your response aligns with the training prices in Form B of the RFP document. Include any additional information regarding training that may be of interest to the City of Winnipeg.
- (a) Approach: Describe the proposed schedule, participants, and curriculum and include any prerequisite knowledge required of each of the user types: Administrator (responsible for control parameter and event notification configuration), End User (Plant Operators and Plant Supervisors), Process Analyst (responsible for data management and administration), and IST (technical resources). Specify logistical requirements for on-site training e.g. classroom, white board, internet access, etc. Note that the City will provide computers and other necessary equipment.
 - (b) System Manuals: Provide a listing of all user, administrator, and installation/IT manuals, along with any other associated instructional reference materials that will be made available to the City once the contract is awarded. Documentation should be provided as hard and soft copies.

B14. HISTORICAL DATA ACCESS

- B14.1 The solution should be able to access historical DCS data, LIMS test results, and logbook entries. The purpose of this is to facilitate long term data analysis and trending. Five to ten years of historical data should be available in the new solution. Describe your approach for accomplishing this task, with reference to the components listed below. Include any additional information regarding data conversion that may be of interest to the City of Winnipeg.
- (a) Resources: Describe roles and responsibilities of Proponent and City of Winnipeg staff who will participate in the data conversion. Describe what tools you can provide to facilitate access of sample, test, and audit data.
 - (b) Approach: Provide your approach/methodology that will be used for analysis, design, data testing and validation, and implementation. Describe success factors for achieving our data access goals and any constraints, limitations, or risks related to this task.

B15. BUSINESS REQUIREMENTS

- B15.1 Proponent should complete and submit Form N: Business Requirements. The solution should meet the requirements listed in E5.

B16. TECHNICAL AND NON-FUNCTIONAL REQUIREMENTS

- B16.1 Proponent should complete and submit Form N: Technical and Non-Functional Requirements. The solution should meet the requirements listed in E6.

B17. DISCLOSURE

- B17.1 The City has engaged Veolia to provide advice and recommendations on upgrades and capital modifications to the City's wastewater treatment facilities. Veolia will be in attendance at meetings and workshops and assist with reviews throughout the Project. This does not relieve the Supplier of their obligation.

B17.2 Various Companies 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 Companies is listed below.

B17.3 The Companies are:

- (a) dataParc
- (b) Eramosa
- (c) Hach
- (d) Northwest Analytics
- (e) WaterTrax

B18. QUALIFICATION

B18.1 The Proponent 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 Proponent does not carry on business in Manitoba, in the jurisdiction where the Proponent 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.

B18.2 The Proponent 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>

B18.3 The Proponent 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

B18.4 The Proponent 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 Proponent and of any proposed Subcontractor.

B18.5 The Proponent shall provide, on the request of the Contract Administrator, full access to any of the Proponent's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Proponent's equipment and facilities are adequate to perform the Work.

B19. OPENING OF PROPOSALS AND RELEASE OF INFORMATION

B19.1 Proposals will not be opened publicly.

B19.2 After award of Contract, the names of the Proponents and the Contract amount of the successful Proponent 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/>

B19.3 To the extent permitted, the City shall treat all Proposal Submissions as confidential, however the Proponent is advised that any information contained in any Proposal Submission may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).

B19.4 Following the award of Contract, a Proponent will be provided with information related to the evaluation of his/her submission upon written request to the Contract Administrator.

B20. IRREVOCABLE OFFER

B20.1 The Proposal(s) submitted by the Proponent shall be irrevocable for the time period specified in Paragraph 10 of Form A: Proposal.

B20.2 The acceptance by the City of any Proposal shall not release the Proposals of the other responsive Proponents and these Proponents shall be bound by their offers on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any offer shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 10 of Form A: Proposal.

B21. WITHDRAWAL OF OFFERS

B21.1 A Proponent may withdraw his/her Proposal without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B21.1.1 Notwithstanding C21.6, the time and date of receipt of any notice withdrawing a Proposal shall be the time and date of receipt as determined by the Manager of Materials.

B21.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Proposal or the Proponent's authorized representatives named in Paragraph 11 of Form A: Proposal, and only such person, has authority to give notice of withdrawal.

B21.1.3 If a Proponent gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Proposal until after the Submission Deadline has elapsed;
- (b) open the Proposal to identify the contact person named in Paragraph 3 of Form A: Proposal and the Proponent's authorized representatives named in Paragraph 11 of Form A: Proposal; and
- (c) if the notice has been given by any one of the persons specified in B21.1.3(b), declare the Proposal withdrawn.

B21.2 A Proponent who withdraws his/her Proposal after the Submission Deadline but before his/her offer has been released or has lapsed as provided for in B20.2 shall be liable for such damages as are imposed upon the Proponent 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.

B22. INTERVIEWS

B22.1 The Contract Administrator may, in his/her sole discretion, interview Proponents during the evaluation process.

B23. NEGOTIATIONS

B23.1 The City reserves the right to negotiate details of the Contract with any Proponent. Proponents are advised to present their best offer, not a starting point for negotiations in their Proposal Submission.

B23.2 The City may negotiate with the Proponents submitting, in the City's opinion, the most advantageous Proposals. The City may enter into negotiations with one or more Proponents without being obligated to offer the same opportunity to any other Proponents. Negotiations may be concurrent and will involve each Proponent individually. The City shall incur no liability to any Proponent as a result of such negotiations.

B23.3 If, in the course of negotiations pursuant to B23.2 or otherwise, the Proponent amends or modifies a Proposal after the Submission Deadline, the City may consider the amended Proposal as an alternative to the Proposal already submitted without releasing the Proponent from the Proposal as originally submitted.

B24. EVALUATION OF PROPOSALS

B24.1 Award of the Contract shall be based on the following evaluation criteria:

- (a) compliance by the Proponent with the requirements of the Request for Proposal or acceptable deviation therefrom: (pass/fail)
- (b) qualifications of the Proponent and the Subcontractors, if any, pursuant to B18: (pass/fail)
- (c) Form N: Mandatory Requirements (pass/fail)
- (d) Total Bid Price; 40%
- (e) Form N (Requirements and Specifications) 60%

B24.2 Further to B24.1(a) and B24.1(c), the Award Authority may reject a Proposal as being non-responsive if the Proposal is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Proposal, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.

B24.3 Further to B24.1(b), the Award Authority shall reject any Proposal submitted by a Proponent who does not demonstrate, in his/her Proposal or in other information required to be submitted, that he/she is responsible and qualified.

B24.4 Further to B24.1(d), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

B24.4.1 Further to B24.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B24.5 Further to B24.1(e), Form N: Requirements and Specifications shall be evaluated considering the information submitted in response to B11, B12, B13, B14, B15 and B16.

B24.6 This Contract will be awarded as a whole.

B24.7 Notwithstanding B25.3, If in the sole opinion of the City, a Proposal does not achieve a pass rating for B24.1(a), B24.1(b) and B24.1(c), the Proposal will be determined to be non-responsive and will not be further evaluated.

B24.8 Proposals will be evaluated considering the information in the Proposal Submission and any interviews held in accordance with B22.

B25. AWARD OF CONTRACT

B25.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.

- B25.2 The City will have no obligation to award a Contract to a Proponent, even though one or all of the Proponents are determined to be responsible and qualified, and the Proposals are determined to be responsive.
- B25.2.1 Without limiting the generality of B25.2, 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 Proposal 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.
- B25.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Proponent submitting the most advantageous offer.
- B25.3.1 Following the award of contract, a Proponent will be provided with information related to the evaluation of his/her Proposal upon written request to the Contract Administrator.
- B25.4 Notwithstanding C4 and Paragraph 6 of Form A; Proposal, the City may issue a purchase order to the successful Proponent in lieu of the execution of a Contract.
- B25.5 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 Combined Provision of Goods and Services (2017-02-17)* are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Supply of Goods and Services* 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 the Combined Provision of Goods and Services*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. BACKGROUND INFORMATION

D2.1 The City of Winnipeg Water and Waste Department (WWD) serves the citizens of Winnipeg by protecting public health and the environment by providing quality water, wastewater, land drainage, flood protection, and garbage and recycling services, in a responsive, cost-effective and efficient manner.

D2.2 The WWD is divided into nine business divisions, of which the Wastewater Services Division (WWS) is responsible for wastewater collection, treatment and quality. They are the primary business stakeholder in this RFP.

D2.3 The Information Systems and Technology (IST) Division is an additional division of the WWD, responsible for planning, developing and supporting the computerized information systems and information technology and maintaining all of the Department's hardware and software.

D2.4 The City operates three large, complex, advanced wastewater treatment plants:

- (a) South End Water Pollution Control Centre (SEWPCC)
- (b) West End Water Pollution Control Centre (WEWPCC)
- (c) North End Water Pollution Control Centre (NEWPCC)

D2.5 These plants receive domestic and industrial wastewater from the collection system and treat it to meet licence requirements. Approximately 114,000 Mega litres of wastewater are collected and treated annually.

D2.6 SEWPCC is located at 100 Ed Spencer Drive and processes approximately 20% of the wastewater treated in Winnipeg. It serves a population of roughly 176,000 with an average of 58 million litres treated per day and 16,780 kilograms of total solid contaminants removed per day.

D2.7 WEWPCC is located at 7740 Wilkes Avenue and processes approximately 10% of the wastewater treated in Winnipeg. It serves a population of roughly 86,000 with an average of 20 million litres treated per day and 6,055 kilograms of total solid contaminants removed per day.

D2.8 NEWPCC is located at 2230 Main Street and processes approximately 70% of the wastewater treated in Winnipeg. It serves a population of roughly 404,000 with an average of 195 million litres treated per day and 57,400 kilograms of total solid contaminants removed per day.

D2.9 The City of Winnipeg Wastewater Services has implemented a structured Process Control Management Plan (PCMP), and will implement a Wastewater Reporting Solution (WRS). The PCMP uses Statistical Process Control methods to reduce compliance risk which requires the routine collection of process control data and the communication of that data to members of the process control teams and managers on a regular basis. Supporting this with the existing ad-hoc office tools is inefficient and not sustainable, hence the necessity to pursue implementation of the WRS. The purpose of the PCMP is summarized into two main goals:

- (a) The primary goal of the PCMP is to provide Plant Supervisors with tools to assess whether unit processes are in or out of control without being overly committed to day-to-day involvement. Managing these unit processes provides effective effluent quality control.
- (b) The secondary goal of the PCMP is to provide a process whereby other City of Winnipeg management personnel are notified when "exceptions" to normal conditions occur. Timely

notification is essential in keeping management informed so that resources can be provided to assist in correction of minor issues before they become major ones.

- D2.10 The purpose of this RFP is to procure commercial off-the-shelf (COTS) software and professional services to implement the WRS for the WWS Division.

D3. PROJECT OBJECTIVES

D3.1 The purpose of the project to which this RFP applies is to procure and implement a Wastewater Reporting Solution (WRS) comprised of a set of tools which allows efficient collection, analysis and reporting of operational process data allowing timely informed process control decision making.

D3.2 Through the implementation of the WRS, complemented with the necessary business process alignment and training, the business anticipates the following business outcomes:

- (a) More complete and accurate information available for process control information decision making; and
- (b) Reduction in data collection and/or duplicated data handling by operations.

D4. SCOPE OF WORK

D4.1 The Work to be done under the Contract shall consist of the supply and implementation of a Wastewater Reporting Solution for the Water and Waste Department.

D4.2 The major components of the Work are as follows:

- (a) Supply a solution composed of one or more Commercial-Off-The-Shelf (COTS) products and usage licenses
 - (i) Including software licensing for end-user and reporting licenses
 - (ii) See requirements items E4, E5, and E6
- (b) Professional Services for software configuration and implementation
 - (i) Including activities and work products to address gathering of detailed requirements, development of solution architecture, technical design and specifications, report development, data conversion, installation, testing, project management
 - (ii) See requirements item B12, E2
- (c) Product and Configuration documentation
 - (i) See requirements items E2, E4, E5, and E6
- (d) Product and End-user Training and Support
 - (i) See requirements item B13
- (e) Historical Data Access
 - (i) See requirements item B14

D4.3 The Work shall be done on an "as required" basis during the term of the Contract.

D4.3.1 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.

D4.3.2 Subject to C7.2, the City shall have no obligation under the Contract to purchase any quantity of any item in excess of its actual operational requirements.

D5. DEFINITIONS

D5.1 When used in this Request for Proposal:

- (a) "**Alarm Limit**" means numerical limits that when passed by a monitored parameter will raise a flag to notify plant staff and off-site support personnel that corrective actions taken in response to warning limit exceedance, have not been readily effective. At this stage, it is

critical and imperative that additional contingency plans be implemented or resources be made available. Warning and alarm limits bracket normal operational ranges in the facility;

- (b) "**City**" means the municipal corporation of the City of Winnipeg;
- (c) "**Control Parameter**" means;
- (d) "**COTS**" means Commercial-Off-The-Shelf system. This is a technology system that is developed by a dedicated software vendor and is publicly available for purchase;
- (e) "**Dashboard**" means a graphical interface that displays the current status of metrics and key performance indicators. This could be presented as scorecards for performance monitoring and performance reporting of measurements/comparison targets;
- (f) "**DCS**" means Distributed Control System;
- (g) "**Exceptions**" means abnormal conditions which are required to be notified through the operational management structure;
- (h) "**Flag**" means a warning or alarm raised when a monitored parameter passes a warning or alarm limit;
- (i) "**KPI**" means key performance indicators, which is a performance measurement for an organization. In the WRS, a KPI is a subset of the control parameters or an aggregate of calculations;
- (j) "**LIMS**" means Laboratory Information Management System;
- (k) "**NEWPCC**" means North End Water Pollution Control Centre;
- (l) "**PCMP**" means Process Control Management Plan, a plan to support the Winnipeg Sewage Treatment Program staff and management in developing, implementing and maintaining management techniques and procedures in controlling sewage treatment processes;
- (m) "**PCS**" means Process Control System;
- (n) "**Proponent**" means any Person or Persons submitting a Proposal for Goods and Services;
- (o) "**Report**" means information produced from the WRS solution, usually in the form of standardized or customized templates. Reports are usually preconfigured or can be easily customized and are available in a variety of formats, including but not limited to; PDF, RTF, XML, XLS, CSV, HTML, TXT, etc;
- (p) "**Report by Exception**" means a report detailing and notifying of an exception occurrence;
- (q) "**SCADA**" means Supervisory Control and Data Acquisition;
- (r) "**SEWPCC**" means South End Water Pollution Control Centre;
- (s) "**Target**" means values, or in some cases a range of values, that process parameters should achieve for optimum process control and efficiency. Targets may be determined for intermediate steps required to meet the ultimate goal of optimum process efficiency;
- (t) "**Third Party Software**" means software or plug-ins developed by other companies that may be required as part of the overall solution;
- (u) "**Usability**" means the capability of the software to be understood, learned, use and attractive to the user;
- (v) "**Warning Limit**" means numerical limits that when passed by a monitored parameter will raise a flag prompting timely, proactive response, to eliminate or minimize the possibility of the monitored parameter from reaching an upper or lower Alarm Limit, or worse yet, a process upset or permit excursion. Warning limits do not imply there is a problem, but that one is being trended towards;
- (w) "**Wastewater**" means any water that has been adversely affected in quality by environmental pollution and pollutants originating from human activity. Municipal wastewater is usually conveyed in a combined sewer or sanitary sewer, and treated at a wastewater treatment plant;
- (x) "**WEWPCC**" means West End Water Pollution Control Centre;

(y) "WRS" means Wastewater Reporting Solution;

D6. CONTRACT ADMINISTRATOR

D6.1 The Contract Administrator is:

Sonali Joshi
Business Systems Analyst
Telephone No. 204 803 4921
Email Address: sjoshi@winnipeg.ca

D6.2 Bids Submissions must be submitted to the address in B7.

D7. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

D7.1 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.

D7.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D7.3 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.

D7.4 A Contractor who violates any provision of D7 may be determined to be in breach of Contract.

D8. NOTICES

D8.1 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

D8.2 Bid Submissions must not be submitted to this facsimile number. Bids must be submitted in accordance with B7.

SUBMISSIONS

D9. AUTHORITY TO CARRY ON BUSINESS

D9.1 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.

D10. INSURANCE

D10.1 The Contractor shall provide and maintain the following insurance coverage:

- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured; such liability policy to also contain a cross-liability clause, non-owned automobile liability and products and completed operations cover, to remain in place at all times during the performance of the Work;
 - (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Service. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence;
- D10.2 Deductibles shall be borne by the Contractor.
- D10.3 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work on the Site.
- D10.4 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.
- D10.5 The City shall have the right to alter the limits and/or coverages as reasonably required from time to time during the continuance of this agreement.

CONTROL OF WORK

D11. COMMENCEMENT

- D11.1 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.
- D11.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D9;
 - (ii) evidence of the workers compensation coverage specified in C6.14;
 - (iii) evidence of the insurance specified in D10;
 - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.

D12. ORDERS

- D12.1 The Contractor shall provide a local Winnipeg telephone number or a toll-free telephone number at which orders for service may be placed.

D13. RECORDS

- D13.1 The Contractor shall keep detailed records of the services 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) service date(s); and
 - (d) description and quantity of services provided.
- 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 portion of Work performed 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

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 work performed;
- (e) the amount payable with GST and MRST 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 **Bid Submissions must not be submitted to the above facsimile number. Bids must be submitted in accordance with B7.**

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. PAYMENT SCHEDULE

D16.1 Payment Schedule (Progress Payments)

- (a) The contractor shall provide in their project proposal a payment schedule that clearly states payment amounts and conditions associated to specific project milestones. The conditions of the milestones must be clear and precise, i.e. evaluate that a project milestone is reached and all deliverables associated to that milestone have been produced to the satisfaction of the City, prior to issuing payments.

D16.2 Holdback

- (a) The City of Winnipeg will hold back 15 percent (15%) of each progress payment payable 60 calendar days after project completion. Project shall be considered complete when all contracted work as specified in the Contract has been completed and all Deliverables have been approved by the Contract Administrator.

D16.3 Software licence costs and travel and living expenses costs are not included in the holdback.

WARRANTY

D17. WARRANTY

D17.1 Warranty is as stated in C11.

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

E1.1 These Specifications shall apply to the Work.

E1.2 The following are applicable to the Work:

<u>Appendix No.</u>	<u>Appendix Title</u>
Appendix A	Operational Metrics
Appendix B	Process Control Management
Appendix C	Forms
Appendix D	Diagrams & Illustrations
Appendix E	Reports
Appendix F	COW Standards

E1.3 Proponents are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B6.

E2. PROJECT DELIVERABLES

E2.1 Key success factors for the successful implementation of the WRS, the project should include the following activities:

- (a) Defining the Project Plan and Managing the Project: The Proponent will conduct a workshop with internal project stakeholders to elicit sufficient information in order to determine the specifics for the creation of a detailed project plan for the implementation of the solution. The analysis for this Project Plan should be performed engaging business stakeholders in all impacted functional areas. The Project Plan should support the implementation of the solution as a coherent set of activities and associated deliverables including ongoing management of the project.
- (b) Installing Software(s): The Contractor will install all software components on an instance of the infrastructure components as defined in the Proponent response. The installation will be limited to a non-Production environment and shall be conducted collaboratively with WWD Information Systems and Technology resources. Installation scope shall encompass all 3 plants. The Contractor will provide documented installation procedures which will include validation steps. The procedures will be used by the Contractor to install the software.
- (c) Design and Specification: The Contractor will conduct a workshop(s) to elicit sufficient information in order to create a solution design and configuration specification document. The design and specification document will address the following topics:
 - (i) Users, roles and security;
 - (ii) Key control parameters (data points) (see Appendix B);
 - (iii) Reports (see Appendix E);
 - (iv) Dashboards (see Appendix E);
 - (v) Data Entry Forms (see Appendix C);
 - (vi) Data Integration.
- (d) Solution Configuration: The Contractor will configure and develop the solution as per the Design and Specification document.
- (e) Training: The Contractor will provide formal on-site training for the following roles/disciplines:
 - (i) Administration of Solution;

- (ii) Configuration (including Parameters, Reports, Forms, Integrations);
 - (iii) Reporting (End-user reporting);
 - (iv) End User Data Entry.
- (f) Data Migration: The Contractor will, where necessary, migrate sixty (60) months of data into the new solution, including the following:
- (i) Data Mapping;
 - (ii) Export-Transformation-Load (ETL), including verification.
- (g) Testing and Go-Live: The Contractor will develop a testing approach (plan) to execute sufficient testing to verify the new solution performs as expected and acceptable to stakeholders, all of the reports, dashboards, and integrations are accurate and free of defects. Further the Contractor will provide support for the Go-Live (cut-over) period defined in the plan.

E3. SOLUTION VISION

- E3.1 The vision for the WRS is to provide a central point for aggregating daily process control information obtained from the three (3) wastewater treatment facilities, making it available to plant operators, supervisors and extended parties. This information serves several purposes including:
- (a) Measuring and assessing plant and process area performance;
 - (b) Identifying trends and/or areas of concern that may jeopardize regulatory compliance; and
 - (c) Generating various reports to support the PCMP and decision making
- E3.2 A conceptual representation of the solution is depicted in Appendix D.
- E3.3 The WRS will cover four (4) main functional areas, which are summarized below and represented in Appendix D.
- (a) Operational Data Entry – this area provides capabilities to support the manual collection and recording of plant operational data including:
 - (i) *Operational records* pertaining to activities carried out by staff within the plant (aka “Log Book”); and
 - (ii) *Process control readings* collected via physical measurement and/or observation by plant staff.
 - (b) Data Management and Configuration – this area is responsible for the management of *Control Parameters* (data points) recorded and monitored within the solution. This includes:
 - (i) The definition of Control Parameters and mapping to respective data sources;
 - (ii) The management of Control Parameter meta-data such data type, validation rules, and other contextual information pertaining to physical plant location and/or process area; and
 - (iii) The specification of upper and lower alarm / warning level limits and target operational values.
 - (c) Reporting & Data Analysis – this area is comprised of tools to support the exploration of process control data stored within the solution, monitor process trends through data visualizations and author formal reports for distribution. This includes:
 - (i) User-defined report creation and distribution of reports;
 - (ii) Data query tools for data exploration, analysis and trending ;
 - (iii) Interactive dashboards tailored for organizational roles;
 - (iv) Development of standard Process Control Management Plan reports, with scheduled execution
 - (v) Automated distribution of Exception Reports to management level as required

- (d) Event Monitoring and Notification – This area is responsible for the definition, management and execution of monitoring of control parameter values relative to event-based rules. This includes capabilities to:
 - (i) Specify event conditions and rules pertaining to Control Parameter values which require notification or action;
 - (ii) Monitor Control Parameters values and identify event conditions relative to defined rules; and
 - (iii) Trigger actions when events occur such as sending email notifications, creation of incident records and generation of reports.

- E3.4 The WRS solution will be integrated with other WWD enterprise systems including:
 - (a) Laboratory Information Management System (LIMS) to receive analytical test results from samples obtained from plant operational areas; and
 - (b) Plant PCS/SCADA systems which collect and summarize daily process measurements within the various process areas.

- E3.5 The WRS solution will also provide information to other interested parties and business units including:
 - (a) Compliance Reporting Branch for distributing required information to support environmental monitoring initiatives and government / regulatory license compliance; and
 - (b) Engineering division and branches for long-term analysis and planning.

- E3.6 The WRS will be accessed by authorized users from three (3) work locations, namely Wastewater Treatment Plants, Engineering Department and Management Offices as shown in Figure 3 (Appendix D).

- E3.7 The WRS will be predominantly used by Plant Operators, Supervisors and the Process Control Management team to perform the following business functions:
 - (a) Daily recording of plant process measurements and shift operator activities performed;
 - (b) Supervisory-level monitoring of plant performance;
 - (c) Generate reports based on pre-defined templates and communicate these to the stakeholders;
 - (d) Escalate exception reports through the management chain; and
 - (e) Exploration of process control data to support analysis of issues within plant operational areas and process efficiency.

THE RESPONSES TO THE REQUIREMENTS LISTED IN E4, E5, E6 ARE TO BE SUBMITTED ON FORM N: REQUIREMENTS AND SPECIFICATIONS

E4. MANDATORY REQUIREMENTS

- E4.1 Proponent must provide at least one (1) reference for a contract in the water or wastewater industry as per the requirements defined in section B11.

- E4.2 System manuals must be provided as hard and soft copies, as per the requirements defined in section B13.

- E4.3 The solution must have direct access to at least five (5) years of historical data, or all of the historical data for parameters which have been added within the past five (5) years, as per the requirements defined in section B14.

- E4.4 The information captured within the *Operating Records* must be consistent with the definition and requirements outlined in the Manitoba Government's *Water and Wastewater Facility Operators Regulation 77/2003, section 33*, as per the requirements defined in section E5.1.
- E4.5 The solution must provide the capability to allow for the manual entry of plant measurements, the ability to view captured data, provide a message if an entry is invalid, as per the requirements defined in section E5.1.
- E4.6 The solution must provide the capability to monitor Control Parameters events, as per the requirements defined in section E5.2.
- E4.7 The solution must provide the ability to configure and manage control parameters, set limits and targets for control parameters, define rules and alerts based on control parameters, and track and display data lineage, as per the requirements defined in section E5.2.
- E4.8 The solution must support the creation and management of Data Capture Forms and provide the ability to define and enforce validation rules, as per the requirements defined in section E5.2.
- E4.9 The solution must allow users to navigate, select, view and interpret data in a variety of formats, and the ability to save data query results in a variety of formats, as per the requirements defined in section E5.3.
- E4.10 The solution must provide user configurable process monitoring dashboards and performance tracking capabilities, as per the requirements defined in section E5.3.
- E4.11 The solution must provide the ability to generate and distribute predefined reports on a regular basis, as per the requirements defined in section E5.3.
- E4.12 The solution must support integration with external sources, as per the requirements defined in section E5.4.
- E4.13 The solution must support the ability to administer automated data feed validation, including the ability to purge data by a set schedule, set parameters for data irregularities, and transform data, as per the requirements defined in section E5.4.
- E4.14 The solution must be capable of being run on Windows Server 2012 operating system for pre-production and production environments, as per the requirements defined in section E6.1.
- E4.15 The solution must provide security features capable of integrating with Active Directory, as per the requirements defined in section E6.1.
- E4.16 The solution must be available as per the requirements defined in section E6.1.

E5. BUSINESS REQUIREMENTS

E5.1 Operational Data Entry

- (a) Operational Process Data: Describe how the solution provides the capability to support the manual recording of information collected by plant operators during a shift within a single plant location. The information to be captured within the solution and supporting activities can be categorized as Operator Records and Process Control Readings as described below. For both types of information, and their corresponding activities, describe how your solution meets the characteristics listed below. Include any additional information regarding operational process data that may be of interest to the City of Winnipeg.
 - (i) Operator Records: Describe how the proposed solution provides the capability to log *Operating Records* for each operational shift within the plant. The information captured within the *Operating Records* should be consistent with the definition and requirements outlined in the Manitoba Government's *Water and Wastewater Facility Operators Regulation 77/2003, section 33*. The activity of entering *Operating*

- Records* during a single shift shall define a single unit-of-work that should be formally submitted to the solution, on or before the end of shift.
- (ii) **Process Control Readings:** Describe how the proposed solution provides the capability to record plant measurements taken manually by operators based on a predefined schedule. All measurement readings should include the operator, time of measurement and any additional comments. The activity of capturing Process Control Readings should be performed on a daily basis and submitted as a single unit-of-work.
 - (iii) **View Previous Records:** The solution should provide the ability for the user to view previously captured data, while performing data capture activities within a form. When entering Operator Records for the current shift, the end-user should have simple access to entries made in at least the prior 4 shifts. When entering Process Control Readings for the current day, the end-user should have simple access to Operator Records from at least the prior 2 days.
 - (iv) **Corrections:** The solution should allow authorized users to edit submitted data (unit-of-work). Any changes to submitted data should be fully audited and require comments by the user performing the changes.
 - (v) **Mobile Capability:** The solution should support the use of mobile devices such as tablets and smartphones for entering both Operational Records and Process Control Readings.
- (b) **Auditing:** Describe how the solution provides full auditing of entries and edits of all operational process data. Describe how your solution meets the characteristics listed in the sub-sections below. Include any additional information regarding auditing that may be of interest to the City of Winnipeg.
- (i) **Audit Information:** Audit trail information should include user ID, date/time of entry /change (where applicable), and should track changes to both transaction data and WRS configuration.
 - (ii) **Audit Trail Viewing:** Audit trail information and audit trail reports should only be accessible to users with specific privileged roles.
- (c) **Operational Data Management Support:** Describe how the solution provides the capability to manage processes governing the activities related to operational data capture within the plant. This includes the scheduling of data capture activities, the definition of events and conditions to trigger notifications and related review and approval functions. Describe how your solution meets the characteristics listed below. Include any additional information regarding operational data management support that may be of interest to the City of Winnipeg.
- (i) **Data Capture Scheduling:** The solution should provide the ability to predefine schedules for the regular capture of operational data. Scheduling of data capture should include the ability to stipulate non-collection days, such as statutory holidays and weekends where applicable.
 - (ii) **Submission Workflow:** The solution should provide the ability to manage data entry activities (unit-of-work) through a submission process. Upon submission, the solution should verify all mandatory entries are included. Upon successful submission, the unit-of-work should be no longer editable by the original user and a configurable supervisor should be notified.
 - (iii) **Event Monitoring and Notification:** The solution should provide the capability to monitor Control Parameter values relative to any predefined event conditions / rules (as defined in section E5.2). Upon recognizing a condition or event, the solution should perform the prescribed actions (send notifications, create incident records, etc.) as described in section E5.2.
 - (iv) **Incident Management:** The solution should support the ability automatically (per iii) or manually create and track Incidents related to Control Parameter deviations or other events defined in Appendix B. Once created, incidents should be managed in the solution in accordance with the Exception workflow defined in Appendix B. Any incidents automatically created by the solution should notify operator via email.

E5.2 Data Management and Configuration

- (a) Control Parameter Administration: Explain how the solution provides the ability to define, configure and manage “process control parameters”. Control parameters are time-based data values which are of either Discrete or Calculated type as described below. For both types of Control Parameters, describe how your solution meets the functional characteristics listed below. Include any additional information regarding control parameter administration that may be of interest to the City of Winnipeg.
- (i) Control Parameter Types: The solution should support the ability to define Control Parameters which derive their value from either a Discrete Data Source or are derived from a Calculation within the solution.
 - (ii) Discrete Control Parameters: The solution should support the ability to define Control Parameters which are based on time-based data imported directly from an external system or a file-based data sources (see section E5.4) or manually entered Operational Data (see section E5.1).
 - (iii) Calculated Control Parameters: The solution should provide the ability to define Control Parameters which are calculated from one or more Discrete Control Parameters. The solution should provide common statistical functions (average, mean, minimum, maximum, moving average, standard deviation, etc.) for computing aggregate metrics over various time periods (daily, weekly, monthly, etc.). Calculated Control Parameters should be updated automatically, if/when their dependent data source value change. If calculated values are persisted in the solution, previous values should be available for viewing and reporting.
 - (iv) Control Parameter Limits & Targets: The solution should provide the ability to optionally define for any Control Parameter a “target value” and one for more “control limits”. Limit and target values should be available for display on charts and/or inclusion in reports, Dashboards and Scorecards. The specification of limit and target values should include applicable effective dates, to account for changes over time.
 - (v) Metadata: The solution should provide the ability to define and capture metadata for any and all Control Parameters. Metadata should include information regarding the Type of Control Parameter (Discrete or Calculated), data source(s), the business context of the parameter (plant, location, process area, equipment, etc.) and any other pertinent information.
 - (vi) Events and Notifications: The solution should provide the ability to define Event and Rules for Control Parameters, which can be used to trigger notifications (see section E5.2) to end-users. Defined events should include when a Control Parameter value crosses a defined *Limit* and when a Control Parameter value maintains a deviant value for a prolonged duration.
 - (vii) Traceability: The solution should provide the ability to track and display data lineage information for all Control Parameter data. Such information should include data source, data transformation and/or computation performed and any audited changes.
- (b) Data Capture Administration: Describe how the solution supports the creation and management of Data Capture Forms to be used for the two Operational Data Entry activities as described in section E5.1. The design of forms within the solution should include the following capabilities listed below. Include any additional information regarding data capture administration that may be of interest to the City of Winnipeg.
- (i) Forms Administration: The solution should provide the ability to create forms capable of entering and editing data mapped to one or more *Discrete Control Parameters* that share a common context (time range and location). Access to forms should be restricted to specific roles and user groups.
 - (ii) Forms Data Validation: The solution should provide the ability to define validation rules governing individual data elements on the form (field-based validation) and on the collection of data elements on the form (form-based validation). Validation rules of form data elements should be consistent with the Configuration Parameters to which they are mapped. Forms should not allow data to be stored in the form

(database) if a corresponding / applicable validation rule fails. Forms should present visual warning messages to the end-user, when validation fails. Forms should allow a user to explicitly override a validation rule and store data, provided the user enters a comment.

E5.3 Reporting

- (a) Data Exploration: Explain how the solution provides a versatile and robust platform which allows users to navigate, select, view and interpret data in a variety of formats (tabular and graphical). The solution should provide data drill-down capability from charts and aggregated data, from charts, and includes the ability to query results and other pertinent data as well as formal predefined reports. Explain how the solution is able to create, and automatically update, control charts and control limits, and display the latter graphically and numerically. Explain how the solution supports trend analysis. Include any additional information regarding data exploration that may be of interest to the City of Winnipeg.
 - (i) Visualization: The solution should provide the ability to view historical and current and archived data records, in the form of a screen view, ad hoc query, or formal report. Data availability should allow data from different locations to be viewed, regardless of user location.
 - (ii) Control Charts: The solution should provide the ability to create a variety of data visualizations including but not limited to: individual X, Multiple Y, X-Bar & R, Moving Range, Bar, Line, Pie, etc., the ability to provide automatic data retrieval and plotting, and the ability to track and display user defined control limits as well as display limits based on plotted data.
 - (iii) Statistical Analysis: The solution should provide the ability to apply statistical trending rules to the charts and identify points that follow a rule or trend, and the ability to compare like datasets over user defined time periods.
 - (iv) Export Formats: The solution should provide the ability to save data query results and structured reports in a variety of appropriate formats, including but not limited to: PDF, HTML, DOC, XLS, XML, TXT, CSV.
- (b) Process Performance Monitoring: Explain how the solution provides the ability to create standardized process monitoring dashboards and performance scorecards, based on Control Parameters and Key Performance Indicators (KPIs) managed within the solution, and with features to support further investigation into KPIs. Include any additional information regarding dashboards that may be of interest to the City of Winnipeg.
 - (i) Dashboards: The solution should be capable of developing dashboard-style data visualizations to present the current status of key Control Parameters related to a plant of specific operational area / unit within a plant. Dashboards should be highly interactive, with controls for altering time-ranges and for drill-down into specific data elements.
 - (ii) Performance Tracking: The solution should provide the ability to define KPIs based on specific Control Parameters within the solution, typically Calculated Control Parameters. KPIs and their respective targets should be capable of inclusion on Dashboards and/or organized into Performance Scorecards. The solution should provide graphical and tabular data visualizations, and the ability to drill down from KPIs to examine a further level of detail.
- (c) Automated Reporting: Explain how the solution is able to define, execute, store and distribute pre-defined, standardized document-style reports. The solution proposed should incorporate the capabilities listed below. Include any additional information regarding automated reporting that may be of interest to the City of Winnipeg.
 - (i) Tools and Templates: Provide a listing and brief description of the report authoring tools and templates provided in the solution. The solution should provide the ability to create complex, multi-page document reports that include both tables and charts. The solution should provide the capability for end-users to provide annotation text and embedded images in published reports.
 - (ii) Scheduling and Distribution: The solution should provide the ability to generate and distribute predefined reports on a regular basis (daily, weekly, monthly) to specific

user roles and groups. The solution should have the ability to provide either a report attachment or a link to a report. The solution should have the ability to maintain report distribution lists / groups with individual email addresses.

E5.4 Data Integration

- (a) LIMS Integration: Explain how the solution supports integration with the City's LIMS (Thermo-Scientific Sample Manager), specifically for the purpose of utilizing laboratory test results within process control decision making. The solution should provide capabilities to import laboratory test results and sample information on a pre-defined, recurring schedule (minimum twice per day). Describe system features and functions available out of the box or with minimal configuration that support this integration. Include any additional information regarding LIMS integration that may be of interest to the City of Winnipeg.
 - (i) Approach: The solution should provide the ability to integrate directly to the COW LIMS (SampleManager 11.2 – Thermo-Scientific). Alternately, but less desirable, the LIMS can produce data exports which may serve as an intermediary data transfer mechanism, into the proposed WRS solution.
 - (ii) Mapping: The solution should provide the ability to easily map LIMS data to corresponding Control Parameters defined in the solution, as described in section E5.2.
- (b) Plant Process Control System (PCS) Data Integration: Explain how the solution supports integration with plant operational data for the purpose of using the data for decision making. Structured plant operational data resulting from process monitoring activities should be automatically imported into the solution based on a recurring schedule (minimum 8 hour intervals). Describe system features and functions available out of the box of with minimal configuration that support this integration. Describe any additional plant metrics that may be incorporated into the solution during plant expansion. Include any additional information regarding PCS data integration that may be of interest to the City of Winnipeg.
 - (i) Approach: The solution should provide the ability to integrate directly to existing DCS-based system used in the three treatment plants (Bailey/ABB Process Control View (PCV) version 5.4). Alternately, but less desirable, existing data exports from the current DCS may be used as an intermediary data transfer mechanism, for importing into the proposed WRS solution.
 - (ii) Mapping: The solution should provide the ability to easily map PCS data to corresponding Control Parameters defined in the solution, as described in section E5.4.
 - (iii) Flexibility: The solution should be capable of transitioning from the existing DCS-based systems to the new Citect SCADA systems, utilizing a Wonderware Historian, in the next 3-5 years.
 - (iv) Expansion: The solution should be capable of introducing additional plant information into the solution, with minimal to no IT staff involvement.
- (c) Other Systems Integration: Explain how the proposed solution, including all software products, components and modules, is capable of integrating with other enterprise systems, such as Work Order Management systems. Include any additional information regarding other systems integration that may be of interest to the City of Winnipeg.
- (d) Data Quality Administration: Explain how the solution supports the ability to administer automated data feed validation, for the purpose of monitoring and improving the quality of data values relative to the control parameter limits (section E5.2). Data quality administration includes the ability to purge data by a set schedule, set parameters for data irregularities, and transform data. Include any additional information regarding data quality administration that may be of interest to the City of Winnipeg.
 - (i) Business Rules Configuration: The solution should provide the ability to configure data cleansing, data transformation, and data validation business rules for automated data imports from LIMS, PCS and all other external systems. The solution should provide the ability to flag records as reportable for different categories, e.g. reportable for compliance, excluded from reports, etc.

- (ii) Data Exception Handling: The solution should provide the ability to configure and manage data exception workflows for automated data import, based on business rules. Data exception handling workflows should include the ability to notify data quality analysts of exceptions and provide reporting/viewing of the data and related business rules that triggered the exception. Workflows should also allow data correction activities to be performed by an authorized user and/or via business rules automatically.
- (iii) Change Data Capture: The solution should have the ability to recognize any data values that have changed since a prior import, if applicable. The solution should allow all changes to be included, with any changes audited and available for review in the future.

E6. TECHNICAL AND NONFUNCTIONAL REQUIREMENTS

- E6.1 The Contractor shall supply a Wastewater Reporting Solution in accordance with the technical and non-functional requirements hereinafter specified; including but not limited to:
- (a) Technical Architecture: Describe the overall architecture of your proposed solution. Include any relevant models / diagrams and descriptions necessary to convey the following architectural perspectives of your solution (business, application, information and technology). Include any additional information regarding architecture that may be of interest to the City of Winnipeg.
 - (i) Business architecture: Describe how your solution is designed to meet the specific business functions and processes envisioned for the COW's Wastewater Reporting Solution per section E3.
 - (ii) Data architecture: Describe how information is organized, secured/controlled, managed and maintained within your solution. Include a description of the key data entities relevant to the scope of the WRS and how these entities are managed over the long-term of the solution. Include any references to data / information that is persisted and managed internal to your solution and/or linked to any external systems.
 - (iii) Application architecture: Describe the discrete modules and components of your solution, and how they relate to the required functions of WRS. Include a description of the underlying technology platform (e.g. Java, .Net, etc.) and industry standards on which your solution is based.
 - (iv) Technical architecture: Describe the "typical" network topology and deployment configurations for your solution in municipal wastewater implementations. Include all deployment nodes (application servers, database servers, end-user workstations, mobile devices, etc.) and the respective deployment unit(s) (applications, modules, components) deployed on each. Include any relevant network components (firewalls, zones, etc.) and/or enterprise systems (Directory Server, Mail Server, etc.) as applicable.
 - (b) Infrastructure Requirements: Describe the recommended infrastructure specifications required to host and manage your solution within the COW enterprise. Recommendations should be provided for all servers, end-user workstations and devices, and include specifications for operating system, CPU, RAM, and local storage. Where multiple configuration options exist, provide recommendations to meet our needs. All infrastructures proposed should be consistent and compatible with COW desktop workstation and server standards as noted in Appendix F. Any exceptions to the COW standards should be clearly noted in your response. The inclusion of tables, diagrams and other visual models to describe the specifications is encouraged. Provide recommended specifications for two (2) independent environments – Production and Non-Production (Dev / Test) - addressing the operating locations, anticipated work load and maintenance environments listed in the sub-sections below. Include any additional information regarding infrastructure requirements that may be of interest to the City of Winnipeg.

- (i) Locations: The *Production* infrastructure should be capable of operating independently within each PCC (plant), with or without network connectivity with the entire COW enterprise. Under normal operating conditions, the solution should be available from all network connected workstations within the WWD.
 - (ii) Operational work load: The *Production* infrastructure should be adequately sized to address concurrent user metrics, as detailed in Appendix A.
 - (iii) Support Environment: The solution should include a *Non-Production* environment, which is isolated from the main *Production* environment infrastructure.
 - (iv) Other dependencies: Provide a list of any and all hardware and/or software components that are NOT included in your proposal, but will be required by the COW to efficiently operate *Production* and *Non-Production* environments (e.g. Database Backup solution, Enterprise Job Scheduler, etc.).
- (c) System Management: Describe the system management activities and processes required to operate and maintain the vitality of your proposed solution over time. Include any additional information regarding system management that may be of interest to the City of Winnipeg.
- (i) Active Directory: The solution should integrate with the City of Winnipeg's Corporate User Directory (MS Windows Server 2012 Active Directory) for authenticating users.
 - (ii) Access: The solution should provide the ability to define and control user access to functions and datasets through combination of role-based and group-based authorization controls. Describe the features and capabilities used to control access (granted/denied) and user profile and session management.
- (d) Performance: Describe the expected performance of your solution for common functional activities. Performance metrics should be relative to normal operating conditions (see Appendix A regarding user loads) and based on the infrastructure recommendations provided in your response. Include any additional information regarding performance that may be of interest to the City of Winnipeg.
- (i) Startup Performance: Provide typical metrics for user login and invoking any major functional of major application login, data form initiation. Describe performance expectations for application startup and user login.
 - (ii) Standard Tasks Performance: Describe performance expectations for data entry, generating and viewing KPIs, data review and approval, navigating through the solution, generating notifications. Common daily tasks should not take more than one second.
 - (iii) Reporting Performance: Describe performance expectations for standard report generation (standard, pre-defined reports).
 - (iv) Scalability: Describe the capability of your solution to scale to accommodate increased user demands, peak load times, and other high volume usage scenarios. Describe the capability of your solution to scale to accommodate future enhancements.
- (e) Availability: Describe the capabilities of your solution to meet the availability requirements noted below. Include any additional information regarding availability that may be of interest to the City of Winnipeg.
- (i) Standard Availability Requirements: All functions of the solution should be available for use at the plants 24/7/365, excluding scheduled outages.
- (f) Support: Describe the support and maintenance services you plan to offer post-implementation, including Service Level Agreements (SLAs) that align with the pricing in Form B. Be specific and include all options for support levels/methods, and time of availability. Include delineation between tasks for which the City of Winnipeg will be responsible vs. those that your support services will provide. Include any additional information regarding support that may be of interest to the City of Winnipeg.
- (i) Support types: Describe the types of Business and/or Technical support typically offered to and used by your customers. Include any limitations, restrictions, or constraints for accessing your support services.

- (ii) Incident Management and Escalation: Describe your customer facing and internal processes for managing incidents, including issue classification and escalation approach.
- (g) Usability: Describe how your solution is designed to be user-friendly and intuitive. Include a robust description of the global design features within the solution that assist and guide the user through an aesthetically appealing experience when performing routine tasks. The City of Winnipeg describes usability as the capability of the software to be understood, learned, used, and attractive to the user. In your response, please consider the points below. Include any additional information regarding usability that may be of interest to the City of Winnipeg.
 - (i) Understandability: The solution should demonstrate the following characteristics: Descriptions and demonstrations are available to solution users. Guides and context sensitive messages are displayed to solution users.
 - (ii) Learnability: The solution should demonstrate the following characteristics: Functions can be absorbed quickly. Functions and flows within the solution are intuitive and require actions that are discreetly defined and apparent.
 - (iii) Operability: The solution should demonstrate the following characteristics: There is consistency across functions and screens. Common data elements can be selected rather than entered. Colour coding and conditional formatting is used to indicate status/state of a system artifact or data element. Icons and images are used, where beneficial to the user experience. Data visualization techniques are applied, to facilitate understanding of presented data. Navigation through the solution functions is clear and can be effectively done without a mouse when applicable. Self-explanatory messages that clearly indicate resolutions are present where appropriate. The ability to undo actions is provided where appropriate.
 - (iv) Attractiveness: The solution should demonstrate the following characteristics: Screen layouts are aesthetically pleasing. Styles, colors and fonts are used consistency throughout the application. The application has a modern look and feel when using solution functions.

E7. HOSTING IN CANADA

- E7.1 If the Proponent is submitting a proposal for Solution Alternative 2, as defined on Form N, the hosting infrastructure, solution components, and solution data must reside entirely within Canada.



WINNIPEG POLICE SERVICE SECURITY CLEARANCE CHECK SERVICES – DIVISION 30

PART F - SECURITY CLEARANCE

F1. SECURITY CLEARANCE

- F1.1 Each individual proposed to perform Work under the Contract shall be required to obtain a Police Information Check from the police service having jurisdiction at his place of residence. This can be obtained from one of the following;
- (a) police service having jurisdiction at his/her place of residence; or
 - (b) BackCheck, forms to be completed can be found on the website at: <http://www.backcheck.net/> ; or
 - (c) Commissionaires (Manitoba Division), forms to be completed can be found on the website at: <https://www.commissionaires.ca/en/manitoba/home>.
- F1.2 The original Police Information Check (Form P-612) will be provided by the Winnipeg Police Service to the individual applicant. The original has a validation sticker from the Winnipeg Police Service in the top right hand corner. The applicant shall:
- (a) Provide the original Police Information Check (Form P-612) to the Contract Administrator.
- F1.3 Prior to the award of Contact, and during the term of the Contract if additional or replacement individuals are proposed to perform Work, the Contractor shall supply the Contract Administrator with a Police Information Check obtained not earlier than one (1) year prior to the Submission Deadline, or a certified true copy thereof, for each individual proposed to perform the Work.
- F1.4 Any individual for whom a Police Information Check is not provided, or for whom a Police Information Check indicates any convictions or pending charges related to property offences or crimes against another person will not be permitted to perform any Work.
- F1.5 Any Police Information Check obtained thereby will be deemed valid for the duration of the Contract subject to a repeated records search as hereinafter specified.
- F1.6 Notwithstanding the foregoing, at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require an updated Police Information Check. Any individual who fails to provide a satisfactory Police Information Check as a result of a repeated Police Information Check will not be permitted to continue to perform any Work.