



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 864-2012

**REPLACEMENT OF A 1200 MILLIMETRE GATE VALVE AND STRUCTURAL
MODIFICATIONS AT WILKES RESERVOIR VALVE PIT 'B'**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 REPLACEMENT OF A 1200 MILLIMETRE GATE VALVE AND STRUCTURAL MODIFICATIONS AT WILKES RESERVOIR VALVE PIT 'B'

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, January 31, 2013.

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. SITE INVESTIGATION

B3.1 Further to C3.1, the Contract Administrator or an authorized representative will be available at the Site from 9:00 am on January 22, 2013 to provide Bidders access to the Site.

B3.2 The Bidder is advised that site access is restricted and access to view the Site can only be made under supervision of the City.

B3.3 The Bidder is advised that the valve chamber is a Confined Entry location. Persons wishing to enter the chamber will be required to supply all necessary personal protective safety equipment, including body harness, hard hat, and safety boots. The City of Winnipeg will provide a retrieval hoist, lighting, and gas detector. Personnel attending the site must be properly trained in Confined Space Entry in accordance with Manitoba legislation and their individual company policy.

B3.4 Although attendance at the Site Investigation is not mandatory, it is strongly suggested that Bidders attend.

B3.5 Bidders are required to register for the Site Investigation at least 48 hours prior by contacting the Contract Administrator identified in D4.

B3.6 Bidders registered for the site visit must provide the Contract Administrator identified in D4 with a Public Safety Verification search obtained not earlier than one (1) year prior to the site visit.

(a) The Public Safety Verification Check may be obtained from BackCheck. Forms to be completed can be found on the website at: <http://www.backcheck.net/>. Note that the check will take between 12 and 48 hours to complete. See Appendix A for further information.

B3.7 The Bidder shall not be entitled to rely on any information or interpretation received at the Site Investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

B3.8 Bidders will not be allowed to take pictures at any of the site investigations. The Bidder may request pictures of specific areas from the Contract Administrator identified in D4. The pictures will then be issued to all the Bidders registered for the site investigation.

B4. ENQUIRIES

B4.1 All enquiries shall be directed to the Contract Administrator identified in D4.

B4.2 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 notify the Contract Administrator of

the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.

- B4.3 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.
- B4.4 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.
- B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

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 10 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 Plant, Materials and methods 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 five (5) 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 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 proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;

(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 proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.

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, only to the Bidder who requested approval of the substitute.

B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely 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 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.

B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.6 deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B15.1(a).

B7. BID COMPONENTS

B7.1 The Bid shall consist of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices;
- (c) Bid Security
 - (i) Form G1: Bid Bond and Agreement to Bond, or
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or
a certified cheque or draft;

B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.

B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.

B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.

B7.4.1 Samples or other components of the Bid 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.

B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.

B7.6 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).

B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B7.8 Bids shall be submitted to:

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

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 12 of Form A: Bid shall be signed in accordance with the following requirements:

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

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

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

B9. PRICES

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

B9.2 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.

B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10. QUALIFICATION

B10.1 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; 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.

B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

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

B10.3 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);
- (d) upon request of the Contract Administrator, obtain Security Clearances in accordance with Appendix A ;

B10.4 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
- (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>

B10.5 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.

B10.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B11. BID SECURITY

B11.1 The Bidder shall provide bid security in the form of:

- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
- (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
- (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.

B11.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.

B11.1.2 All signatures on bid securities shall be original.

B11.1.3 The Bidder shall sign the Bid Bond.

B11.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.

B11.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.

B11.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B11.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.

B11.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.

B11.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

B12. OPENING OF BIDS AND RELEASE OF INFORMATION

B12.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.

B12.1.1 Bidders or their representatives may attend.

B12.1.2 Bids determined by the Manager of Materials, or his/her designate, to not include the bid security specified in B11 will not be read out.

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) 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 11 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 until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 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 C23.3, 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 12 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 12 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, including the right to retain the Bidder's bid security.

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 there from (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (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 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 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

B15.4.2 Further to B15.1(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.

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.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* 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 Construction*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of the installation of a City supplied 1200 millimetre butterfly valve and actuator, and modifications to the existing valve chamber structure.

D2.2 The major components of the Work are as follows:

- (a) 1200 millimetre butterfly valve
 - (i) Removal of roof slabs
 - (ii) Removal and salvage of valve chamber components including the existing 1200 millimetre gate valve and actuator
 - (iii) Installation of City supplied 1200 millimetre butterfly valve and actuator
 - (iv) Modification of existing valve chamber piping to suit new valve
 - (v) Reconnection of instrumentation and power supply to new valve
 - (vi) Replacement and sealing of roof slab
 - (vii) Restoration
- (b) Valve chamber modifications
 - (i) Removal of existing Aerofoam insulation from the chamber interior
 - (ii) Installation of polystyrene insulation around the exterior of the chamber
 - (iii) Installation of galvanized steel floor beams
 - (iv) Installation of floor hatch
 - (v) Installation of Lapeyre stair, with safety gate and handrails
 - (vi) Removal of existing ladder

D3. DEFINITIONS

D3.1 When used in this Bid Opportunity:

- (a) "**AWWA**" means American Water Works Association;
- (b) "**ASTM**" means American Society for Testing and Materials; and
- (c) "**CSA**" means Canadian Standards Association.

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Rob Carroll, P.Eng
Project Engineer

Telephone No. 204 986 8409
Facsimile No. 204 224 0032

D4.2 At the pre-construction meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D4.3 Bids Submissions must be submitted to the address in B7.8

D5. CONTRACTOR'S SUPERVISOR

D5.1 At the pre-construction meeting, the Contractor shall identify his/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D6. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

D6.1 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.

D6.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D6.3 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.

D6.4 A Contractor who violates any provision of D6 may be determined to be in breach of Contract.

D7. NOTICES

D7.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

D7.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D7.3, D7.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the facsimile number identified in D4.1.

D7.3 Notwithstanding C21, 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

D7.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

The City of Winnipeg
Legal Services Department
Attn: Director of Legal Services

Facsimile No.: 204 947-9155

D8. FURNISHING OF DOCUMENTS

- D8.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him/her at cost.

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. SAFE WORK PLAN

- D10.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D10.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

D11. INSURANCE

- D11.1 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, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (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 Work. 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.
 - (c) an all risks Installation Floater carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- D11.2 Deductibles shall be borne by the Contractor.
- D11.3 The Contractor shall provide the City Solicitor 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 but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D11.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D12. PERFORMANCE SECURITY

- D12.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
 - (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
 - (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.
- D12.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.
- D12.2 If the bid security provided in his/her Bid was not a certified cheque or draft pursuant to B11.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D13. SUBCONTRACTOR LIST

- D13.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the General Conditions for the return of the executed Contract.

D14. DETAILED WORK SCHEDULE

- D14.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D14.2 The detailed work schedule shall consist of the following:
- (a) A Gantt chart for the Work;
acceptable to the contract administrator.

SCHEDULE OF WORK

D15. COMMENCEMENT

- D15.1 The Contractor shall not commence any Work until he/she is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.
- D15.2 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 C6.15;
 - (iii) the Safe Work Plan specified in D10;
 - (iv) evidence of the insurance specified in D11;

- (v) the performance security specified in D12;
 - (vi) the Subcontractor list specified in D13; and
 - (vii) the Detailed Work Schedule specified in D14.
- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

D16. SCHEDULE RESTRICTIONS

- D16.1 Shutdown of a portion of the Branch II Aqueduct will be scheduled based on a number of factors including routine maintenance and repair work, water demand and other factors. The City will endeavour to make the specified time periods available to the Contractor to schedule the Work requiring removal of the Branch II Aqueduct from service, without limiting the City's control over the operation of the Branch II Aqueduct to complete other work, maintain adequate system service and maintain the integrity of the infrastructure. The City shall reserve the right to cancel and/or delay these schedule dates at any time, due to any circumstances that could adversely affect water supply system operation, including but not limited to high water demand, abnormal weather, failures of related water system components and/or security concerns.
- D16.2 The Contractor shall provide a minimum of fifteen (15) Working Days notice to the Contract Administrator, in writing, of requiring a shutdown. The City will endeavour to schedule the shutdown as requested, pursuant to D16.1.
- D16.3 The Bidder shall note that portions of the Work requiring a shutdown of the Branch II Aqueduct can only be carried out during the time period prior to May 21 or after September 17 of a given year, unless amended as specified in D16.1.
- D16.4 Further to D16.1, shutdown of the Branch II Aqueduct is limited to a maximum of five (5) calendar days, measured from the completion of draining the Branch II Aqueduct by City forces to turn over of the system back to the City of Winnipeg for the restoration of Branch Aqueduct and Reservoir Operation.
- D16.5 The Branch II Aqueduct will not be taken out of service unless all piping, valves, connectors, fittings and miscellaneous components required to complete the installation are on site, tested, and pre-fitted, to ensure that the Branch II Aqueduct can be restored to service with the timeframe noted in D16.3.

D17. COOPERATION WITH OTHERS

- D17.1 The Contractor shall note that other contracts and activities are scheduled to be under construction on the Water Treatment and Supply System during the proposed Works. This includes:
- (a) City of Winnipeg Bid Opportunity 708-2012 – Construction of Water Treatment Plant Protected Connections.
 - (i) Activities involving shutdowns to the Branch II Aqueduct will require coordination with other contractors.
- D17.2 The Contractor shall accommodate work by City Forces or third party Contractors related to ongoing operation and maintenance of the Hurst Pumping Station and Wilkes Reservoir. Vehicular access to Hurst Pumping Station and Wilkes Reservoir must be maintained at all times.

D18. SUBSTANTIAL PERFORMANCE

- D18.1 The Contractor shall achieve Substantial Performance by June 24, 2013.
- D18.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted

during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

- D18.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D19. TOTAL PERFORMANCE

- D19.1 The Contractor shall achieve Total Performance by July 8, 2013.
- D19.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D19.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D20. LIQUIDATED DAMAGES

- D20.1 If the Contractor fails to achieve Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the following amounts per Working Day for each and every Working Day following the days fixed herein for same during which such failure continues.
- (a) Substantial Performance – One Thousand Five Hundred dollars (\$1,500.00)
 - (b) Total Performance – Five Hundred dollars (\$500.00)
- D20.2 The amount specified for liquidated damages in D20.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance or Total Performance by the days fixed herein for same.
- D20.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

CONTROL OF WORK

D21. JOB MEETINGS

- D21.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D21.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D22. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D22.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

MEASUREMENT AND PAYMENT

D23. PAYMENT

D23.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D24. WARRANTY

D24.1 Warranty is as stated in C13.

FORM H1: PERFORMANCE BOND
(See D12)

KNOW ALL MEN BY THESE PRESENTS THAT

_____ ,
(hereinafter called the "Principal"), and

_____ ,
(hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), in the sum of

_____ dollars (\$_____)

of lawful money of Canada to be paid to the Obligee, or its successors or assigns, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a written contract with the Obligee for

BID OPPORTUNITY NO. 864-2012

REPLACEMENT OF A 1200 MILLIMETRE GATE VALVE AND STRUCTURAL MODIFICATIONS AT
WILKES RESERVOIR VALVE PIT 'B'

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall:

- (a) carry out and perform the Contract and every part thereof in the manner and within the times set forth in the Contract and in accordance with the terms and conditions specified in the Contract;
- (b) perform the Work in a good, proper, workmanlike manner;
- (c) make all the payments whether to the Obligee or to others as therein provided;
- (d) in every other respect comply with the conditions and perform the covenants contained in the Contract; and
- (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, and demands of every description as set forth in the Contract, and from all penalties, assessments, claims, actions for loss, damages or compensation whether arising under "The Workers Compensation Act", or any other Act or otherwise arising out of or in any way connected with the performance or non-performance of the Contract or any part thereof during the term of the Contract and the warranty period provided for therein;

THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Surety shall not, however, be liable for a greater sum than the sum specified above.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as Principal, and that nothing of any kind or matter whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of Sureties to the contrary notwithstanding.

IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)**
(See D12)

(Date)

The City of Winnipeg
Legal Services Department
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 864-2012

REPLACEMENT OF A 1200 MILLIMETRE GATE VALVE AND STRUCTURAL MODIFICATIONS
AT WILKES RESERVOIR VALVE PIT 'B'

Pursuant to the request of and for the account of our customer,

(Name of Contractor)

(Address of Contractor)

WE HEREBY ESTABLISH in your favour our irrevocable Standby Letter of Credit for a sum not exceeding
in the aggregate

_____ Canadian dollars.

This Standby Letter of Credit may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you. It is understood that we are obligated under this Standby Letter of Credit for the payment of monies only and we hereby agree that we shall honour your demand for payment without inquiring whether you have a right as between yourself and our customer to make such demand and without recognizing any claim of our customer or objection by the customer to payment by us.

The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn upon it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that it be made.

Partial drawings are permitted.

We engage with you that all demands for payment made within the terms and currency of this Standby Letter of Credit will be duly honoured if presented to us at:

(Address)

and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by us.

All demands for payment shall specifically state that they are drawn under this Standby Letter of Credit.

Subject to the condition hereinafter set forth, this Standby Letter of Credit will expire on

(Date)

It is a condition of this Standby Letter of Credit that it shall be deemed to be automatically extended from year to year without amendment from the present or any future expiry date, unless at least 30 days prior to the present or any future expiry date, we notify you in writing that we elect not to consider this Standby Letter of Credit to be renewable for any additional period.

This Standby Letter of Credit may not be revoked or amended without your prior written approval.

This credit is subject to the Uniform Customs and Practice for Documentary Credit (1993 Revision), International Chamber of Commerce Publication Number 500.

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

- E1.1 These Specifications shall apply to the Work.
- E1.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Spec/Default.stm>
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
D-13045	Wilkes Ave Reservoir – Wilkes Reservoir Valve Pit B - Location and Plan Views of Valve Pit “B”
D-13046	Wilkes Ave Reservoir – Wilkes Reservoir Valve Pit B - Valve Pit “B” Section Views and Plan of Floor Slab
D-13047	Wilkes Ave Reservoir – Wilkes Reservoir Valve Pit B - Access Floor Modifications
D-13048	Wilkes Ave Reservoir – Wilkes Reservoir Valve Pit B - Structural Details 1
D-13049	Wilkes Ave Reservoir – Wilkes Reservoir Valve Pit B - Structural Details 2
D-13052	Wilkes Ave Reservoir – Wilkes Reservoir Valve Pit B - Typical Hand Railing Plan and Detail
D-13053	Wilkes Ave Reservoir – Wilkes Reservoir Valve Pit B - Typical Hand Railing Details

GENERAL REQUIREMENTS

E2. CONDITION, PROTECTION OF AND ACCESS TO RESERVOIR COMPOUNDS AND AQUEDUCTS

- E2.1 Description
- This Section details operating constraints for all work to be carried out in close proximity to the Wilkes Reservoir facility and surrounding piping.
 - Wilkes Reservoir and Hurst Pumping Station are critical components of the City of Winnipeg Water Supply System. Work in close proximity to the Reservoir and surrounding yard piping shall be undertaken with an abundance of caution.
- E2.2 Site Security
- All personnel on Site are required to obtain a Criminal Record Search Certificate and Public Safety Verification Check, as outlined in Appendix A. The Contractor shall submit copies of the Criminal Record Search Certificates to the Contract Administrator identified in D4.
 - The City of Winnipeg will provide one (1) security key to the Contractor, upon receipt of a five hundred dollar (\$500) security deposit cheque. The cheque will be returned upon return of the security key. The Contractor shall provide the name and contact information for the person in charge and responsible for security on Site.

- (c) The Contractor is required to take measures necessary to secure the work areas when the work areas are vacated. When security personnel and crews are not within visual range of Reservoir access gates, the gates shall be closed.
- (d) On a daily basis during the course of work, advise the City of Winnipeg Deacon Control Centre at 204-986-4781 as to the status of the site security, and in particular when Contractor staff leave the Site. The Contractor is not required to provide security services when not on Site.
- (e) Provide a secure temporary site storage compound for all specialized components, from the time they are delivered to the Site until they are incorporated into the Works. The location of the temporary site storage compound shall be approved by the Contract Administrator.

E2.3 Photographs

- (a) All site photographs required for construction documentation shall be approved by City of Winnipeg Water Services Division representative, as identified by the Contract Administrator.

E2.4 Site Safety

- (a) Be fully responsible for all aspects of Site and public safety, in compliance to D22.
- (b) Install Contractor's locks on City installed lock-out devices on all valve and sluice gates (closed position) prior to the commencement of the replacement of the 1200mm gate valve.
- (c) The City of Winnipeg will provide access to valve locations. The Contractor shall name a primary contact and backup personnel, available on a 24 hour per day basis, with access to lockout keys, in the event of an emergency.

E2.5 General Considerations for Work within the Wilkes Reservoir compound

- (a) The Wilkes Reservoir compound contains numerous water conduits that are critical components of the City of Winnipeg Water Supply. Work around any of these pipelines shall be well planned and executed to ensure that the pipelines are not subjected to construction related loads, including excessive vibrations and concentrated or asymmetrical lateral loads during backfill placement.
- (b) Under no circumstances will traffic or equipment be permitted on the buried Wilkes Reservoir structure, embankment slopes, or adjacent valve chambers

E2.6 Submittals

E2.6.1 Submit proposed construction equipment specifications intended to work in proximity to Aqueducts and Yard Piping, to the Contract Administrator for review seven (7) days prior to construction. Submittal shall include:

- (a) Equipment operating weight and dimensions including wheel or track base, track length or axle spacing, track widths or wheel configurations;
- (b) Payload weights; and
- (c) Load distributions in the intended operating configuration.

E2.6.2 Submit a Construction Method Statement with proposed construction plan including haul routes, excavation equipment locations, loading positioning and base construction sequencing to the Contract Administrator for review seven (7) days prior to construction. Do not commence construction until the Construction Method Statement has been reviewed and accepted by the Contract Administrator.

E2.6.3 The Contractor shall ensure that all work crew members understand and observe the requirements of these work procedures and constraints. Prior to commencement of on-site work, the Contractor shall jointly conduct an orientation meeting with the Contract Administrator with all superintendents, foremen and heavy equipment operators to make all workers on Site fully cognizant of the limitations of altered loading on the Aqueduct and

Yard Piping, the ramifications of inadvertent damage to the pipelines, the constraints associated with work in close proximity to the Aqueduct and Yard Piping and the specific details of the Construction Method Statement in instances where a Construction Method Statement is in effect.

E2.6.4 Employees of the Contractor or any Subcontractor that fail to comply with the conditions for working in close proximity to the Aqueduct and Yard Piping shall be promptly removed from the Site.

E2.7 Construction Procedures

E2.7.1 Pre-work, Planning and General Execution

- (a) No work shall commence at the Site until a Construction Method Statement has been reviewed and accepted. The Method Statement is to be a formal submission from the contractor as to his proposed construction methodology, including procedures, equipment and timing, in order for him to demonstrate to the Contract Administrator his understanding of the scope and limitations on the work and conformance to project specifications and these recommendations.
- (b) Pipeline centreline and outside of pipe locations shall be clearly delineated in the field.
- (c) Contact the Contract Administrator prior to construction.
- (d) Work shall only be carried out with equipment that has been reviewed and quantified in terms of its loading implications by the Contract Administrator.
- (e) Vehicular traffic that is compliant to City of Winnipeg load restrictions will be permitted to cross pipelines once suitable granular subbase or temporary crossing is in place that will adequately support loads without rutting. Temporary pipeline crossings shall be constructed to the same grade as existing or proposed ground.
- (f) For crossings of pipelines in support of construction activities, designate crossing locations and confine equipment crossing the pipe(s) to these locations. Reduce equipment speeds to levels that minimize the impacts of impact loading.
- (g) Subgrade, subbase, base construction, or temporary crossings shall be kept in a rut free condition at all times. Construction equipment is prohibited from crossing pipelines until subbase is constructed and the grade is sufficient to support the equipment without rutting.
- (h) No materials shall be stockpiled above or within 5 metres of a pipeline centerline.
- (i) For construction work activities either longitudinally or transverse to the alignment of the pipeline work only with equipment and in the manner stipulated in the accepted Construction Method Statement and the supplemental requirements noted herein.
- (j) Where work is in close proximity to pipelines, utilize construction practices and procedures that do not impart excessive vibration loads on the pipeline or that would cause settlement of the subgrade below the pipeline.

E2.7.2 Excavation

- (a) Where there is less than 1.6 metres of earth cover over a pipeline and further excavation is required either adjacent to or over the pipeline, utilize only smooth edged excavation buckets, soft excavation or hand excavation techniques. Where there is less than 1 metre of cover over a pipeline, carefully expose the pipe by hand excavation to delineate the location and depth of the main, and provide full time supervision of the excavation.
- (b) Offset backhoe or excavation equipment from the pipeline a minimum of 3 metres from centerline, to carry out excavations.
- (c) Equipment should not be allowed to operate while positioned directly over a pipeline.

E3. ENVIRONMENTAL PROTECTION

- E3.1 The Contractor shall be aware that the Wilkes Reservoir compound is for potable water supply and no contamination by fuel, chemicals, etc. shall be permitted at any time. Fuels or chemicals shall not be stored within 30 metres of the Reservoir or piping.
- E3.2 The Contractor shall plan and implement the Work of this Contract strictly in accordance with the requirements of the environmental protection measures as herein specified.
- E3.3 Submittals
- (a) Environmental protection plan including:
 - (i) Names of persons responsible for ensuring adherence to Environmental Protection Plan.
 - (ii) Names and qualifications of persons responsible for manifesting hazardous waste to be removed from Site.
 - (iii) Names and qualifications of persons responsible for training site personnel.
 - (iv) Descriptions of environmental protection personnel training program.
 - (b) The Contractor is required to prepare and submit the following to the Contract Administrator prior to commencing construction, if applicable:
 - (i) Storm Water Pollution Prevention Plan describing water quality protection measures including erosion and sediment controls, inspections, monitoring and staff training. The Plan shall also provide a schematic drawing indicating location and type of erosion and sediment protection measures.
 - (ii) Drawings showing locations of proposed temporary excavations or embankments for haul roads, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on Site.
 - (iii) Traffic control plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Plans include measures to minimize amount of mud transported onto paved public roads by vehicles or runoff.
 - (iv) Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use. Plan to include measures for marking limits of use areas including methods for protection of features to be preserved within authorized work areas.
 - (v) Spill Control Plan including procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.
 - (vi) Construction Waste Management Plan describing onsite waste management, disposal, reuse or materials, recycling and staff training.
 - (vii) Hazardous Material Spill Management Plan describing management, reporting, emergency response and contact numbers, as well as staff training.
- E3.4 The Contractor is advised that at least the following Acts, Regulations, and By-laws apply to the Work:
- (a) Workplace Hazardous Material Information System (Hazardous Product Act and Canada Labour Code);
 - (b) Canadian Environmental Protection Act;
 - (c) Canadian Environmental Assessment Act;
 - (d) Transportation of Dangerous Goods Act;
 - (e) Manitoba Environmental Act;
 - (f) The Endangered Species Act E111;
 - (g) The Manitoba Nuisance Act N120;
 - (h) The Public Health Act c.P210;

- (i) Manitoba Dangerous Goods, Handling, and Transportation Act;
- (j) Fisheries Act;
- (k) The Workplace Safety and Health Act W210; and
- (l) Current applicable associated regulations.

E3.5 The Contractor is advised that the following environmental protection measures apply to the Work.

E3.5.1 Materials Handling and Storage

- (a) Construction materials shall not be stored within five (5) metres of existing pipe centerlines.

E3.5.2 Fuel Handling and Storage

- (a) The Contractor shall abide by the requirements of Manitoba Environment for handling and storage of fuel products.
- (b) All fuel handling and storage facilities shall comply with The Dangerous Goods and Transportation Act Storage and Handling of Petroleum Products Regulation and any local land use permits.
- (c) Fuels, lubricants, and other potentially hazardous materials as defined in The Dangerous Goods and Transportation Act shall be stored and handled within the approved storage areas.
- (d) The Contractor shall ensure that all fuel storage containers are inspected daily for leaks and spillage.
- (e) Products transferred from the fuel storage area(s) to specific work sites shall not exceed the daily usage requirement.
- (f) When servicing requires the drainage or pumping of fuels, lubricating oils or other fluids from equipment, a groundsheet of suitable material (such as HDPE) and size shall be spread on the ground to catch the fluid in the event of a leak or spill.
- (g) Refuelling of mobile equipment and vehicles shall take place at least 100 metres from a watercourse.
- (h) The area around storage sites and fuel lines shall be distinctly marked and kept clear of snow and debris to allow for routine inspection and leak detection.
- (i) A sufficient supply of materials, such as absorbent material and plastic oil booms, to clean up minor spills shall be stored nearby on-site. The Contractor shall ensure that additional material can be made available on short notice.
- (j) Where stationary equipment is required to be erected on or within the reservoir dikes, equipment shall be staged on impermeable containment membrane or containment pans of sufficient volume to contain all hazardous fuels and liquids plus a safety factor of 50 percent.
- (k) Fuelling of stationary equipment shall be completed with portable tanks containing only enough fuel to fill equipment.

E3.5.3 Waste Handling and Disposal

- (a) The construction area shall be kept clean and orderly at all times during and at completion of construction.
- (b) At no time during construction shall personal or construction waste be permitted to accumulate for more than one day at any location on the construction site, other than at a dedicated storage area as may be approved by the Contract Administrator.
- (c) Indiscriminate dumping, littering, or abandonment shall not take place.
- (d) Equipment shall not be cleaned near watercourses; contaminated water from onshore cleaning operations shall not be permitted to enter watercourses.

E3.5.4 Dangerous Goods/Hazardous Waste Handling and Disposal

- (a) Dangerous goods/hazardous waste are identified by, and shall be handled according to, The Dangerous Goods Handling and Transportation Act and Regulations.
- (b) The Contractor shall be familiar with The Dangerous Goods Handling and Transportation Act and Regulations.

E3.5.5 Fires

- (a) Fires and burning of rubbish on Site shall not be permitted.

E3.5.6 Emergency Spill Response

- (a) The Contractor shall ensure that due care and caution is taken to prevent spills.
- (b) The Contractor shall report all major spills of petroleum products or other hazardous substances with the potential for impacting the environment and threat to human health and safety to the Contract Administrator and Manitoba Environment, immediately after occurrence of the environmental accident, by calling the 24-hour emergency telephone phone number 204-945-4888.
- (c) The Contractor shall designate a qualified supervisor as the on-site emergency response coordinator for the project. The emergency response coordinator shall have the authority to redirect manpower in order to respond in the event of a spill.
- (d) The following actions shall be taken by the person in charge of the spilled material or the first person(s) arriving at the scene of a hazardous material accident or the on-site emergency response coordinator:
 - (i) Notify emergency-response coordinator of the accident:
 - ◆ identify exact location and time of accident
 - ◆ indicate injuries, if any
 - ◆ request assistance as required by magnitude of accident (Manitoba Environment 24-hour Spill Response Line (204) 945-4888, Winnipeg Police Service, Winnipeg Fire Paramedic Service, company backup)
 - (ii) Assess situation and gather information on the status of the situation, noting:
 - ◆ personnel on Site
 - ◆ cause and effect of spill
 - ◆ estimated extent of damage
 - ◆ amount and type of material involved
 - ◆ proximity to waterways, the Aqueduct and other pipelines
 - (iii) If safe to do so, try to stop the dispersion or flow of spill material:
 - ◆ approach from upwind
 - ◆ stop or reduce leak if safe to do so
 - ◆ dike spill material with dry, inert sorbent material or dry clay soil or sand
 - ◆ prevent spill material from entering waterways and utilities by diking
 - ◆ prevent spill material from entering Aqueduct manholes and other openings by covering with rubber spill mats or diking
 - (iv) Resume any effective action to contain, clean up, or stop the flow of the spilled product.
- (e) The emergency response coordinator shall ensure that all environmental accidents involving contaminants shall be documented and reported to the Manitoba Environment according to The Dangerous Goods Handling and Transportation Act Environmental Accident Report Regulation 439/87.

E3.5.7 Controlled Products

- (a) Materials classified as "Controlled Products" under Regulation 52/88, "Workplace Hazardous Materials Information System", including amendments, are prohibited

inside the Reservoir fenced area, unless the material will be directly employed in the Work.

E4. BUTTERFLY VALVE, ELECTRIC ACTUATOR, MISCELLANEOUS VALVES AND FITTINGS

E4.1 Supply and Field Testing of 1200 mm Butterfly Valve

E4.1.1 The 1200 mm butterfly valve and electric actuator have been supplied under a separate Bid Opportunity, City of Winnipeg Bid Opportunity No. 680-2011. The valve and actuator have been delivered to the City of Winnipeg Hurst Pumping Station at 60 Hurst Way.

E4.1.2 The Contractor shall attend a delivery inspection, with the Valve Supply Contractor, and Contract Administrator. The Supply Contractor, prior to turning the valve over to the Installation Contractor, shall rectify any damage noted during the delivery inspection. Written acceptance of the valves and actuators by a duly completed "Certificate of Equipment Delivery (Form 200)" (Appendix B) shall constitute acceptance for installation from the Installation Contractor.

E4.1.3 The City shall perform hydrostatic leakage testing of the valves, after delivery. Any leakage or defects noted during field testing shall be repaired by the Supply Contractor, prior to the Installation Contractor taking possession.

E4.1.4 The Installation Contractor may leave the valve and actuator in storage at the City facility at 60 Hurst Way, until required on-site for pre-assembly and installation.

E4.1.5 Once removed from storage at the City facility, the Contractor shall provide 24 hour secure storage for the valve. Once delivered to the Site for pre-assembly and installation, the valve shall remain stored in a secure, on-site storage compound.

E4.1.6 For the purposes of transportation of the valve from the storage facility to the job site, the Contractor shall ensure the following:

- (a) Valve flange faces are protected from damage by installation of a minimum of 20 mm plywood cover on both faces of each valve.
- (b) Valve shall be handled only by methods approved by the manufacturer and properly secured to preclude any damage during transport.

E4.2 Materials

E4.2.1 Bolts

- (a) Bolts for installation of the 1200 mm butterfly valve shall be ASTM A307 grade B. Bolt size, type, and diameter shall be in accordance with AWWA C207, and as indicated on Supplier Shop Drawings (Appendix C).
- (b) Anti-seize compound shall be used on all bolts.

E4.2.2 Flange Gaskets

- (a) 3mm, full faced Styrene Butadiene Rubber (SBR) gaskets or neoprene in accordance with AWWA C207. Gaskets shall be one piece construction where possible. Segmented gaskets shall be constructed of a minimum number of segments and joints shall be of dovetailed construction, or other jointing methods approved by the Contract Administrator.
- (b) Gaskets to be as recommended by the manufacturer for domestic water service.

E4.2.3 Chamber Fittings

- (a) Fittings shall be manufactured to AWWA C200
 - (i) Minimum wall thicknesses of 12.7 millimetres.
 - (ii) Minimum steel yield strength of 307 MPa (30,000 psi)
 - (iii) Paint for exposed steel surfaces shall be in accordance with AWWA C210.

(iv) Coating and lining shall be two (2) or more layers (5 mils dry film thickness minimum each coat) Polyamide Epoxy, Amerlock 400, Tnemec Series 140F Pota-Pox Plus or approved equal in accordance with B6.

(b) Flanges for fitting shall be AWWA C207 minimum Class D Flange.

(c) Shouldered ends shall be to AWWA C606 and shall accommodate dimensions of existing Victaulic Style 44 1,200 millimetre (48") coupling.

E4.2.4 Pipe Couplers

(a) Victaulic Style 44 (Shouldered) End Connections or approved equal to be to the latest revision of AWWA C606 for Grooved and Shouldered Joints.

(b) Bolts and nuts to be 316 stainless steel.

E4.2.5 Cement

(a) Portland Cement shall be CSA A3000 type HS Sulphate Resistant Cement.

(b) Approval in writing is required if the Contractor proposed to use fly ash or pozzolan as a supplementary cementing material in conformance with AWWA Standard C301, Section 4.4.1

(c) Approval requests should be accompanied by a submission from an independent testing laboratory complete with sampling and testing results of the material conforming to ASTM Standard C311.

E4.2.6 Concrete Mix Design

(a) Concrete Mix Design as per Table CW2160.1, Type B mix.

E4.2.7 Paint

(a) Paint for exposed metal surfaces shall be in accordance to AWWA C210.

(b) Coating shall be two (2) or more layers (5 mils dry film thickness minimum each coat) Polyamide Epoxy, Amerlock 400, Tnemec Series 140F Pota-Pox Plus or approved equal in accordance with B6.

E4.2.8 Joint Sealant

(a) Joint sealant for concrete slab shall be self-levelling, polyurethane sealant, Vulkem 45 by Tremco, Sikaflex 1C SL or approved equal in accordance with B6.

E4.3 Submittals

E4.3.1 Submit Shop Drawings for the Chamber Fittings and Pipe Couplers.

E4.4 Construction Methods

E4.4.1 Removal of Existing Valve and Piping

(a) Expose and remove roof slabs.

(b) Disconnect power and control cabling from existing actuator.

(c) Remove existing gate valve, actuator and spool piece.

E4.4.2 Installation of Butterfly Valve

(a) Prior to installation of butterfly valves, the Contractor shall receive installation instructions from the valve supply contractor. Upon completion of installation, Form 201: Certificate of Instruction (Appendix B) shall be completed and submitted to the Contract Administrator.

(b) Estimated mass of the 1200 millimetre butterfly valve and actuator is 2615 kilograms. Actual mass shall be confirmed with the valve supplier for lifting and installation purposes.

(c) Modify concrete base to accommodate installation of new valve.

- (d) Install butterfly valve as shown on the drawings. Valves shall be installed with the valve shaft in the horizontal position. The Supply Contractor is obligated to provide installation supervision, and will complete Form 202: Certificate of Satisfactory Installation (Appendix B) upon successful installation.
- (e) Reconnect instrumentation and power supply to new valve.
- (f) Core 125 mm opening in roof slabs directly above actuator operation nut. Valve box and valve stem extensions shall be installed plumb and aligned directly above the valve actuator operation nut.
- (g) Install new spool piece between valve and existing shouldered Victaulic Style 44 end joint.

E4.4.3 Commissioning of Butterfly Valve

- (a) The Contractor shall assist in operation of the butterfly valve for the purpose of commissioning. The Supply Contractor is required to complete Form 203 (Appendix B), indicating a qualified representative has checked the installed equipment, and has found the equipment to be installed and operating in accordance to the specifications.

E4.4.4 Installation of Roof Slab

- (a) Clean joint surfaces as per sealant manufacturer's instructions.
- (b) Re-install roof slab.
- (c) Apply sealant as per manufacturer's instructions.

E4.5 Method of Measurement and Basis of Payment

E4.5.1 Replacement of 1200 mm Valve at Wilkes Reservoir

- (a) Replacement of the 1200mm Valve at Wilkes Reservoir shall be measured on a lump sum basis. The lump sum price shall include removal, replacement and re-sealing of removable concrete slab, removal of existing gate valve, actuator and chamber piping, valves and appurtenances, installation of the City-supplied butterfly valve and actuator, supply and installation of chamber piping, miscellaneous valves, fittings, appurtenances, and new Victaulic 44 couplings, and electrical modifications.

E5. CHAMBER MODIFICATIONS

E5.1 Materials

E5.1.1 Structural Steel

- (a) As per Drawings D-13048 and D-13049.

E5.1.2 Stainless Steel Threaded Rods

- (a) As per Drawings D-13048 and D-13049.

E5.1.3 Bolts

- (a) As per Drawings D-13048 and D-13049.

E5.1.4 Floor Hatch

- (a) As per Drawing D-13047, or approved equal as per B6.

E5.1.5 Stairs

- (a) As per Drawings D-13052 and D-13053, or approved equal as per B6.

E5.1.6 Guard Rail

- (a) As per Drawings D-13052 and D-13053.

E5.1.7 Rigid Insulation

- (a) Rigid insulation for below grade applications shall be rigid polystyrene insulation conforming to CAN/ULC S701 Type 4, Styrofoam SM by Dow Chemical, Celfort 300 by Owens Corning, or approved equal in accordance with B6.
- (b) Anchorage: Purpose made galvanized steel securement clips as manufactured by T. Clear Corporation or approved equal in accordance with B6.

E5.2 Submittals

E5.2.1 Submit Shop Drawings for the following:

- (a) Steel beams
- (b) Staircase
- (c) Guard Rail

E5.3 Construction Methods

E5.3.1 Structural Steel

- (a) As per Drawings D-13048 and D-13049.

E5.3.2 Stainless Steel Threaded Rods

- (a) As per Drawings D-13048 and D-13049.

E5.3.3 Bolts

- (a) As per Drawings D-13048 and D-13049.

E5.3.4 Floor Hatch

- (a) As per Drawing D-13047

E5.3.5 Stairs

- (a) As per Drawings D-13047, D-13052 and D-13053

E5.3.6 Guard Rail

- (a) As per Drawings D-13052 and D-13053.

E5.3.7 Rigid Insulation

- (a) Remove existing Aerofoam insulation from the chamber interior.
- (b) Excavate around perimeter of the chamber exterior to the depth shown on D-13046.
- (c) Rigid board insulation to be installed as per manufacturer's recommendations using metal fasteners with 25 mm caps or washers. Seams to be sealed with aluminum or white foil tape.
- (d) Backfill excavation

E5.3.8 Surface Restoration

- (a) The Contractor shall be responsible for any damage caused by his forces on existing roadways or accesses and shall repair damaged areas to prior condition as determined necessary by the Contract Administrator.
- (b) The Contractor shall be responsible for Site restoration of disturbed grassed areas. Restoration shall consist of applying topsoil and seeding to restore damaged areas to prior condition as determined necessary by the Contract Administrator.

E5.4 Method of Measurement and Basis of Payment

E5.4.1 Chamber Modifications

- (a) Chamber Modifications shall be measured on a lump sum basis in accordance to these specifications. The lump sum price shall include excavation, backfill, surface restoration,

APPENDIX A – SECURITY CLEARANCE

1. SECURITY CLEARANCE

- 1.1 Each individual proposed to perform Work under the Contract shall be required to obtain a Criminal Record Search Certificate from the police service having jurisdiction at his/her 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) Core of Commissionaires, forms to be completed can be found on the website at: <http://www.commissionaires.mb.ca/> .
- 1.2 Each individual proposed to perform Work under the Contract shall be required to obtain a Public Safety Verification Check. This can be obtained from one of the following;
 - (a) BackCheck, forms to be completed can be found on the website at: <http://www.backcheck.net/>
- 1.2.1 Contact Ron Risley at 204-986-3758 if you have any questions regarding the Public Safety Verification.
- 1.3 Prior to the commencement of any Work, 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 Criminal Record Search Certificate 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.
- 1.4 Any individual for whom a Criminal Record Search Certificate is not provided, or for whom a Criminal Record Search Certificate indicates any convictions or pending charges related to property offences or crimes against another person, will not be permitted to perform any Work.
- 1.5 Any Criminal Record Search Certificate obtained thereby will be deemed valid for the duration of the Contract subject to a repeated records search as hereinafter specified.
- 1.6 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 criminal records search. Any individual who fails to provide a satisfactory Criminal Record Search Certificate as a result of a repeated criminal records search will not be permitted to continue to perform any Work.
- 1.7 Notwithstanding the foregoing, at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require a further Security Clearance Check. Any individual who fails to obtain a satisfactory Security Clearance Check as a result of a repeated Security Clearance Check will not be permitted to continue to perform any Work.