



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 371-2013

2013 WATERMAIN RENEWAL CONTRACT NO. 8

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 2013 WATERMAIN RENEWAL CONTRACT NO. 8

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 pm Winnipeg time, May 22, 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 Bidder may view the Site without making an appointment.

B4. ENQUIRIES

B4.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.

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 PART F - SECURITY CLEARANCE;

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 Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ 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 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 renewal of watermains at various locations in the City of Winnipeg. The major components of the Work are as follows:

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

- (a) Installation of approximately 1015m of 150mm to 300mm diameter PVC watermain pipe by trenchless method;
- (b) Installation of gate valves and hydrant assemblies;
- (c) Abandonment of existing watermains;
- (d) Removal/abandonment of existing hydrant assemblies and gate valves;
- (e) Reconnection or renewal of water service connections;
- (f) Restoration of pavement and boulevard areas;

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is Tetra Tech WEI , represented by:

Gord Steiss C.E.T.
Manager of Construction Services
400 – 161 Portage Avenue E, Winnipeg, Manitoba, R3B 0Y4
Telephone No. 204-954-6800
Facsimile No. 204-988-0546

D3.2 At the pre-construction meeting, Mr. Steiss will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D3.3 Bids Submissions must be submitted to the address in B7.8

D4. CONTRACTOR'S SUPERVISOR

D4.1 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.

D5. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

D5.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.

D5.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D5.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;

- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
- (b) the Contract, all deliverables produced or developed; and
- (c) any statement of fact or opinion regarding any aspect of the Contract.

D5.4 A Contractor who violates any provision of D5 may be determined to be in breach of Contract.

D6. NOTICES

- D6.1 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.
- D6.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.3, D6.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the facsimile number identified in D3.1.
- D6.3 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
- D6.4 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

D7. FURNISHING OF DOCUMENTS

- D7.1 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

D8. AUTHORITY TO CARRY ON BUSINESS

- D8.1 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.

D9. SAFE WORK PLAN

- D9.1 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.

D9.2 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>

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, 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.

D10.2 Deductibles shall be borne by the Contractor.

D10.3 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.

D10.4 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.

D11. PERFORMANCE SECURITY

D11.1 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.

D11.1.1 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.

D11.2 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.

D12. DETAILED WORK SCHEDULE

- D12.1 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.
- D12.2 The detailed work schedule shall consist of the following:
- (a) a Gantt chart for the Work all acceptable to the Contract Administrator.
- D12.3 Further to D13.2(a), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of activity or task. The time shall be on the horizontal axis, and the activity or task shall be on the vertical axis and should include:
- (a) staging sequence of Higgins Avenue Works
 - (b) work near the Health Science Centre Hospital construction on Elgin Avenue.

D13. RAILWAY CROSSING PERMITS

- D13.1 The Contract Administrator will apply for permits for railway crossing of the Canadian Pacific Railway spur line on Higgins Avenue.

SCHEDULE OF WORK

D14. COMMENCEMENT

- D14.1 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.
- D14.2 The Contractor shall not commence any Work on the Site until:
- the Contract Administrator has confirmed receipt and approval of:
- (i) evidence of authority to carry on business specified in D8;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D9;
 - (iv) evidence of the insurance specified in D10;
 - (v) the performance security specified in D11;
 - (vi) the detailed work schedule specified in D12
 - (vii) the railway crossing permits in D13
 - (viii) the security clearances specified in Part F.
- 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.
- D14.3 Commencement of the Work shall be at the discretion of the Contractor provided the commencement date will allow the achievement of the Substantial Performance of the work in accordance with D17 and Total Performance of the work in accordance with D18.

D15. SEQUENCE OF WORK

- D15.1 Further to C6.1, the sequence of work shall comply with the following:
- D15.1.1 Watermain construction on Elgin Avenue from 300 meters west of Sherbrook Street to 50 meters west of Sherbrook Street shall not commence until after June 28, 2013 (School in Session).
 - D15.1.2 Elgin Avenue west of Sherbrook Street is down to one lane of traffic due to fencing installed along the centre line of the existing roadway near the construction area of the new Health Science Centre Hospital expansion. This street is a long cul-de-sac with no exit ending at the City of Winnipeg yards. The Contractor will need to coordinate the work with

the Winnipeg Regional Health Authority and Ellis Don Construction for the portion of the watermain renewal that is located inside the fencing.

- D15.2 The watermain renewal Works for Higgins Avenue from Stanley Street of Main Street and King Street from Henry Avenue to Higgins Avenue must be completed in stages. A possible staging sequence for the work is described in section E12

D16. CRITICAL STAGES

- D16.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- a) Installation of the watermain, temporary pavement and boulevard restorations on Elgin Avenue west of Sherbrook Street by August 30, 2013. Restoration of the pavement and boulevard on the south side of Elgin Avenue east of Ellen Douglas School along the new Health Science Centre Women's Hospital will be completed by others

D17. SUBSTANTIAL PERFORMANCE

- D17.1 The Contractor shall achieve Substantial Performance within 55 (fifty five) consecutive Working Days of the commencement of the Work as specified in D14 or by October 5, 2013 whichever comes first.

- D17.2 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.

- D17.3 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.

D18. TOTAL PERFORMANCE

- D18.1 The Contractor shall achieve Total Performance within 65 (sixty five) consecutive Working Days of the commencement of the Work as specified in D14 or by October 15, 2013, whichever comes first.

- D18.2 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.

- D18.3 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.

D19. LIQUIDATED DAMAGES

- D19.1 If the Contractor fails to achieve Critical Stages, Substantial Performance or Total Performance in accordance with the Contract by the day fixed herein for the same, the Contractor shall pay the City the following amounts for each and every Working Day following the day fixed herein for same during which such failure continues.

- (a) Critical Stages (Elgin Avenue) – One Thousand dollars (\$1,000.00)
(b) Substantial Performance – One Thousand dollars (\$1,000.00);
(c) Total Performance – Five Hundred dollars (\$500.00).

D19.2 The amount specified for liquidated damages in D19.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.

D19.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D20. SCHEDULED MAINTENANCE

D20.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

(a) Landscaping Maintenance as specified in CW 3510 ;

D20.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

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).

D23. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

D23.1 Further to B10.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B10.4.

D24. TRAFFIC CONTROL AND MAINTENANCE OF ACCESS

D24.1 Traffic control shall be carried out in accordance with Section 3.7 of CW 1130.

D24.2 Further to D23.1, should the Contract Administrator require that Work on Regional Streets be carried out at night, on Sunday, on public holidays or that Work be restricted or suspended during peak traffic hours, the Contractor shall comply without additional compensation being considered to meet these requirements.

D24.3 Traffic control during construction shall be as follows:

D24.3.1 Regional Streets include:

- (a) Higgins Avenue – from Stanley Street to Main Street,
- (b) King Street – Henry Avenue to Higgins Avenue and
- (c) Isabel Street – Ross Avenue to Pacific Avenue
 - (i) Construction activities on Regional Streets shall be restricted to the closed lanes between 07:00 to 09:00 hours and 15:30 to 17:30 hours Monday to Friday and other hours as directed by the Contract Administrator.
 - (ii) Intersecting streets and private approaches will be maintained at all times.
 - (iii) Bus traffic will be maintained at all times.

D24.3.2 Residential Streets include:

- (d) Pacific Avenue – from Isabel Street east to limits of construction and
- (e) Elgin Avenue – limits of construction west of Sherbrook Street to Sherbrook Street:
 - (i) Maintain one lane of traffic with streets signed as “Road Closed – Local Traffic Only”.
 - (ii) Intersecting streets and private approaches will be maintained at all times.
 - (iii) Bus traffic will be maintained at all times.

D24.4 Further to Section 3.6 of CW 1130, the Contractor shall maintain safe pedestrian crossing at intersections at all times. If possible, only one pedestrian crossing at an intersection is to be blocked by construction at any one time. If more than one pedestrian crossing is blocked by construction at an intersection at the same time the Contractor shall provide flag persons to safely escort pedestrians across the intersection. The Contractor shall leave pedestrian crossing locations safe and free of equipment that may hamper pedestrians when no construction activities are being performed at a particular crossing location

D24.4.1 The Contractor is advised that the area around Higgins Avenue and King Street have high pedestrian traffic and a very high fraction of pedestrians with disabilities. A higher level of pedestrian safety and accessibility will be required in this area.

D24.5 Construction activities on Regional Streets shall be restricted to the closed lanes between 07:00 to 09:00 hours and 15:30 to 17:30 hours Monday to Friday and other hours as directed by the Contract Administrator.

D24.6 The Contractor will have access to the open lanes of traffic during non-restricted hours provided flag persons are used in accordance with Section 3.12 of the City of Winnipeg, “Manual of Temporary Traffic Control in Work Areas on City Street” to maintain traffic safety.

D24.7 The Contractor shall not park company or private vehicles inside the barricaded work zone in a manner that will block sightlines for vehicles and pedestrians approaching and crossing.

D25. WORK PRACTICES ON ASBESTOS-CEMENT PIPE

D25.1 Further to C6.26(d), the Contractor’s attention is directed to the possible health dangers associated with working with asbestos cement pipe and all work associated with the existing AC water mains shall conform to the following publications:

D25.1.1 “Work Practices for Asbestos-Cement Pipe”, AWWA No. M16, published by the American Water Works Association.

D25.1.2 “Recommended Work Practices for AC Pipe”, 1977, published by the AC Pipe producers Association.

D25.2 The Contractor shall state in the “job specific safe work plan” the proposed procedure for working on Asbestos Cement Pipe. Contractor shall also provide proof of asbestos handling training or certification.

D25.3 Asbestos Cement pipe to be disposed of at the City of Winnipeg Brady Road landfill site at an approved location in the landfill.

MEASUREMENT AND PAYMENT

D26. PAYMENT

D26.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

D27. WATER USED ON CITY OF WINNIPEG CONSTRUCTION PROJECTS

D27.1 Further to Section 3.7 of CW 1120, charges incurred for the permit and water meters shall be paid for by the Contractor when taken out. The Contractor shall forward the invoice to the Contract Administrator for reimbursement. The billing for water usage sent to the Contractor shall be forwarded to the Contract Administrator for payment. The Bid opportunity number shall be noted on each permit.

WARRANTY

D28. WARRANTY

D28.1 Warranty is as stated in C13.

D28.1 Notwithstanding C13.2, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if:

- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.

D28.1.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

FORM H1: PERFORMANCE BOND
(See D11)

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. 371-2013

2013 WATERMAIN RENEWAL CONTRACT NO. 8

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 D11)

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 371-2013
2013 WATERMAIN RENEWAL CONTRACT NO. 8

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 (2007 Revision), International Chamber of Commerce Publication Number 600.

(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>
	Cover Sheet
D13222	Higgins Avenue – Stanley Street to 76m East of Stanley Street
D13223	Higgins Avenue – 76m East of Stanley Street to 5m East of King Street
D13224	Higgins Avenue – 5m East of King Street to Main Street
D13225	King Street – Henry Avenue to Higgins Avenue
D13226	Isabel Street – Ross Avenue to Pacific Avenue
D13227	Pacific Avenue – Isabel Street to 70m East of Isabel Street
D13228	Pacific Avenue – 70m East of Isabel Street to 116m East of Isabel Street
D13229	Elgin Avenue – 293m West of Sherbrook Street to 210m West of Sherbrook Street
D13230	Elgin Avenue – 210m West of Sherbrook Street to 90m West of Sherbrook Street
D13231	Elgin Avenue – 90m West of Sherbrook Street to Sherbrook Street

GENERAL REQUIREMENTS

E2. PROVISIONAL ITEMS

- E2.1 The Provisional items listed in the Schedule of Prices are a part of the Contract.
- E2.2 No Work listed under these provisions will be performed by the Contractor without prior authorization from the Contract Administrator. All Work carried out will be within the construction areas listed in the Specifications.
- E2.3 Notwithstanding C7, The City reserves the right to eliminate all or any portion of the work listed as Provisional Items and no claim shall be made for damages on grounds of loss of anticipated profit.

E3. WATERMAINS

- E3.1 Further to Section 4.1 of CW 2110, Watermains installation measurement for length of watermain installed for on line renewal will be made on a length basis for each size, method of installation, type of bedding and type of backfill measured horizontally at grade above the centre line of the pipe for the length of on line renewal. Payment will be paid for at the Contract Unit Price for "On Line Renewal" for the total number of liner metres supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator. No additional payment will be made for extraction of existing watermain pipe.

E3.2 On line watermain renewals will occur on Higgins Avenue from Station 0+796 to Station 0+856 as shown on the Drawings.

E3.3 The on line watermain renewal on Pacific Avenue from Station 1+85 to Station 2+17 as shown on the Drawings will be installed as open trench with Class 3 backfill. The existing watermain pipe is Asbestos Cement and extraction of pipe is not possible.

E4. BRANCH 1 AQUEDUCT

E4.1 Description

E4.1.1 This Specification details operating constraints for all Work to be carried out in close proximity to the 1200mm Branch 1 Aqueduct. Close proximity shall be deemed to be any construction activity within a 3 m offset from the centreline of the aqueduct.

E4.2 General Considerations for Work in Close Proximity to the 1200mm Branch 1 Aqueduct.

E4.2.1 Work around the 1200mm Branch 1 Aqueduct shall be planned and implemented to minimize the time period that Work is carried out in close proximity the Aqueduct and to ensure that the pipeline is not subjected to excessive construction related loads, including excessive vibrations and/or concentrated or asymmetrical lateral loads during backfill placement.

E4.2.2 Precaution must be undertaken to ensure that applied loading during all phases of construction is within accepted loading parameters.

E4.3 Protection of the 1200mm Branch 1 Aqueduct During Construction

E4.3.1 The Drawings provide the location of the Aqueduct through the construction site. Pipe locations noted on the Drawings are based on the original record drawings.

E4.3.2 The Contractor shall determine pipeline location and obvert elevation at locations marked out by the Contract Administrator by soft excavation methods (hydrovac or hand digging) prior to construction. Soft excavation will be included in the installation of the watermain renewal.

E4.3.3 Contractors working in close proximity to the Aqueduct shall meet the following conditions and technical requirements:

(b) Pre-Work, Planning and General Execution

- (i) No Work shall commence in close proximity to the aqueduct until after a meeting with a representative from each of the City of Winnipeg Water and Waste Department, Contract Administrator and Contractor to review Specification E4 – Operating Constraints for Work in Close Proximity to the 1200mm Branch 1 Aqueduct has taken place and the aqueduct location has been clearly delineated in the field.
- (ii) Contact the City of Winnipeg Water and Waste Department 7 days prior to commencement of any work near the aqueduct.
- (iii) For transverse crossings of the aqueduct in support of pavement construction activities, designate crossing locations and confine equipment crossing the pipe to these locations. Reduce equipment speeds to levels that minimize the impacts of impact loading.
- (iv) For construction Work activities either longitudinally or transverse to the alignment of the aqueduct, Work only with equipment and in the manner that meet the requirements noted herein.
- (v) Subgrade, subbase and base construction shall be kept in a rut free condition at all times. Construction equipment is prohibited from crossing pipelines if the grade is insufficient to support the equipment without rutting.
- (vi) Granular material, construction material, soil or other material shall not be stockpiled on the pipelines or within 3.0 metres of the pipe centerline.

- (vii) Where Work is in proximity to the aqueduct, utilize construction practices and procedures that do not impart excessive vibration loads on the aqueduct or that would cause settlement of the subgrade below the aqueduct.

E4.3.4 Where field conditions are such that Trenchless Method cannot be made the Contractor, after receiving written approval from the Contract Administrator, shall install the pipe in an open trench with Class 3 backfill and shall meet the following conditions and technical requirements:

- (a) Excavation
 - (i) All excavation required within 3.0 metres of the pipe centerline either adjacent to or over the aqueduct, utilize only smooth edged excavation bucket, soft excavation or hand excavation techniques.
 - (ii) Offset backhoe from aqueduct a minimum of 2.5 meters from aqueduct centerline, to carry out excavation.
 - (iii) All materials intended for backfill shall not be dumped directly on pipelines but shall be carefully bladed in place
- (b) Subgrade Construction
 - (i) Subgrade compaction shall be limited to static compaction methods
 - (ii) Stage Work activities to minimize the time period that unprotected subgrade is exposed to the environment and protect the subgrade against the impacts of adverse weather if subbase/ base course construction activities are not sequential with excavation.
- (c) Subbase and Base Course Construction
 - (i) Subbase or base course materials shall not be dumped directly on pipelines but shall be carefully bladed in-place.
 - (ii) Subbase compaction shall be either carried out by static methods without vibration or with smaller approved equipment such as hand held plate packers or smaller roller equipment.

E5. ENCASEMENT PIPE

E5.1 Encasement Pipe

E5.1.1 All encasement pipe shall conform to ASTM Specifications A134, Mild Carbon Steel, A139, Grade A, or AWWA C200-91 Grade B, butt welded joints with entire circumference welded by a certified welder shall be in accordance with AWWA C200-86 Section 3.

E5.1.2 Casing pipe thickness for railroad crossings shall be a minimum of 13 mm thick regardless of diameter.

E5.1.3 Nominal diameter of casing pipe may be larger as needed for restrained joint pipe.

E5.2 Encasement Pipe Spacers

E5.2.1 Further to CW 2110 3.5 if the Contractor uses spacers the encasement pipe spacers shall be 200mm wide, heavy duty two piece stainless steel bands with 25mm wide by 38mm spacers, equal to Advance Products and Systems Inc. (APS) Model SS18 or Link-Seal PSI Model PE.

E5.3 Encasement Pipe End Seals

E5.3.1 Encasement pipe end seals shall be the wraparound rubber with stainless steel band clamps and waterproof mastic or zipper seals spacers, equal to Advance Products and Systems Inc. (APS) Model AW or AZ or Link-Seal PSI Model W.

E6. VALVE PIT ABANDONMENT

E6.1 Description

- E6.1.1 This Specification shall cover the abandonment of an existing cast-in-place, reinforced concrete valve pit.
- E6.2 Construction Methods
- E6.2.1 Remove existing manhole frames and covers, valve box casings and risers to determine if they are salvageable.
- E6.2.2 Demolish pit walls and floor to a minimum of 1500 millimeter below grade or as required for the new watermain installation.
- E6.2.3 Prepare foundation and bedding for watermain installation and install watermain and valve in accordance with CW 2030 and CW 2110.
- E6.2.4 Fill remaining pit and excavation with Class 3 Backfill in accordance with CW 2030.
- E6.2.5 Load and deliver all valves and other material determined to be salvageable by the Contract Administrator, to the Water Services Division Yard located at 552 Plinguet Street and unload the valves and other material at the yard as directed by City personnel.

E6.3 Measurement and Payment

- E6.3.1 Abandonment of existing valve pits shall be measured on a unit basis and paid for at the Contract Unit Price for "Abandonment of Existing Valve Pits". The number of units to be paid for will be the total number of valve pits abandoned and backfilled in accordance with this specification, accepted and measured by the Contract Administrator.

E7. LARGER DIAMETER WATER FITTINGS

- E7.1 AWWA C905 PVC water main fittings will be considered an approved equal as defined in B6.7 and may be used instead of AWWA C110 main line iron fittings.

E8. SURFACE RESTORATIONS

- E8.1 Further to Section 3.3 of CW 1130 of the General Requirements, permanent surface restorations including all sodding and pavement works for each renewal shall be completed within ten (10) working days from the date that the renewal is completed.
- E8.2 All concrete pavement restorations on Higgins Avenue from Princess Street to Main Street, King Street from Henry Avenue to Higgins Avenue and Isabel Street from Ross Avenue to Pacific Avenue and if required on Elgin Avenue in the area of the Health Science Centre construction area shall be performed using 24-hour early opening concrete.

E9. PARTIAL SLAB PATCHES

- E9.1 Construct partial slab patches in accordance with CW 3230. Partial Slab Patches shall be measured on an area basis and paid for at the Contract Unit Price per square metre for "Partial Slab Patches" in Form B of the Bid Submission,
- E9.2 No separate measurement or payment will be made for Drilled Dowels or Tie Bars, the cost for which shall be included in the prices bid for Partial Slab Patches.

E10. MISCELLANEOUS CONCRETE SLAB RENEWALS - SIDEWALKS

- E10.1 Construction of miscellaneous concrete slab renewals in accordance with CW 3235. Miscellaneous concrete slab renewals for sidewalk shall be measured on an area basis and paid for at the Contract Unit Price per square metre of "Miscellaneous Concrete Slab Renewals – Sidewalk" in Form B of the Bid Submission.

E11. CONCRETE CURB RENEWALS

E11.1 Construct concrete curb renewal in accordance with CW 3240. Concrete curb renewal shall be measured on a length basis and paid for at the Contract Unit Price per metre for "Concrete Curb Renewal" in Form B of the Bid Submission.

E12. TEMPORARY SURFACE RESTORATIONS

E12.1 Further to clause 3.3 of CW 1130, where temporary surface restorations must be made to reopen lanes to traffic, the Contractor shall temporarily restore surface as follows:

E12.1.1 Backfill excavation with Class 1 Backfill extending to the underside of cold mix asphalt.

E12.1.2 Cap excavation in pavement with a minimum 50 millimetre thick layer of cold mix asphalt.

E12.2 The Contractor shall maintain temporary restored surfaces until permanent restoration is complete or until the reconstruction of the roads by others begins on the following streets:

a) Higgins Avenue – from Stanley Street to Main Street

b) King Street – from Henry Avenue to Higgins Avenue

c) Isabel Street – from Ross Avenue to Pacific Avenue

d) Pacific Avenue – from Isabel Street to 120m East of Isabel Street

E12.3 Method of Measurement and Payment

E12.3.1 Temporary surface restoration will be measured on an area basis and be paid for at the Contract Unit Price per square metre for "Temporary Surface Restorations", measured as specified herein which price shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the work included in this Specification.

E13. PROTECTION OF EXISTING TREES

E13.1 The Contractor shall take the following precautionary steps to avoid damage from his construction activities to existing boulevard trees within the limits of the construction area.

E13.1.1 Do not stockpile materials and soil or park vehicles and equipment on boulevards within 2 meters of trees.

E13.1.2 Strap mature tree trunks with 25 x 150 x 2400 wood planks. Smaller trees shall be similarly protected using appropriately sized planks.

E13.1.3 Excavations shall be carried out in a manner to minimize damage to existing root systems. Where roots must be cut to facilitate an excavation they shall be neatly pruned at the face of the excavation.

E13.1.4 Work on site shall be carried out in a manner to minimize damage to existing tree branches. Where damage to tree branches does occur, the Contractor shall neatly prune the damaged branch.

E13.1.5 American elm trees shall not be pruned between April 1st and August 1st and Siberian elm trees between April 1st and July 1st of any year provisions of The Dutch Elm Disease Act.

E13.2 All damage to existing trees due to the Contractor's construction activities shall be repaired to the requirements and satisfaction of the City of Winnipeg, Public Works Department, Forestry Branch.

E13.3 No separate measurement or payment will be made for protection of trees.

E14. STAGING OF HIGGINS AVENUE AND KING STREET WORKS

E14.1 Construction Sequence

The watermain renewal on Higgins Avenue from Stanley Street to the west side of Main Street and on King Street from Henry Avenue to 15 meters north of Higgins Avenue will require staged construction. The Contractor will be required to confirm elevations of existing services and install Isolation valves before commencement of any work. A preliminary construction staging sequence is proposed as follows to assist the Contractor in completing this complex work.

E14.1.1 Stage 1: King Street and Higgins Avenue east of King Street

- (a) Install temporary services for 333 King St. and 221 Higgins Ave. from the hydrant at the northwest corner of Main St. and Higgins Ave.
- (b) Temporary service for 328 King St. and 341 Princess Ave. can be installed from a hydrant located on the east side of Princess Street north of Higgins Avenue (this hydrant is located near the CPR railway).
- (c) If buildings at 270 Higgins Ave. and 313 Princess St. require a temporary service, this can be supplied from an existing hydrant located at the north west corner of Henry Ave. and King St.
- (d) The service to 303 King St. can be isolate by closing the 150 mm gate valve located on the right turn island (King St. NB to Higgins Ave. EB) at approximate King St. station 1+60.
- (e) Cut and install a temporary plug on the existing 300mm watermain at approximate Higgins Ave. station 1+109 (near Main St.). This watermain may be isolated by closing three valves on Main St. and one at Princess St. This will maintain the hydrant at the northwest corner of Main St. at Higgins Ave. to supply for temporary services. Re-opening the Main St. valves will maintain the supply to 303 King St.
- (f) In the King St. and Higgins Ave. intersection, confirm elevations of the existing 300mm watermain cross at Higgins Ave and King St. and the 300mm and 250mm watermain crossings at the west limit of King St. This will determine the elevation of the new 300mm cross.
- (g) Install 300mm King St. watermain from station 1+01.87 (temporary plug at Henry St.) to station 1+69.38 (200mm reducer connection at Higgins Ave.).
- (h) Install 200mm King St. watermain from the station 1+69.38 (200mm reducer connection at Higgins Ave.) to station 1+93.06 (temporary plug north of Higgins Ave.).
- (i) Install 300mm Higgins Ave. watermain from a new 300mm gate valve near the west limit of King St. at station 1+003.06 to station 1+109 (near Main St.). The existing 250mm Higgins Ave. watermain will be kept live during this installation to supply temporary services and hydrants.
- (j) Complete flushing, hydrostatic leakage testing and disinfection of this section of watermain.
- (k) Complete the final connections at the north and south limits on King St. and to the east limits on Higgins Ave. at Main St. Complete any service connections.

E14.1.2 Stage 2: Higgins Avenue Stanley Street to King Street

- (a) Install 300mm gate valve on existing 300mm Princess St. watermain south of Higgins Ave. (near south limit of Higgins Ave.). This will permit the existing 250mm Higgins Ave. watermain to be isolated.
- (b) Disconnect the existing Stanley St. 'east' 150mm watermain from the Higgins Ave. 300mm watermain near station 0+813.5 (east of the existing watermain valve chamber to be abandoned). Reconnect to the 150mm Higgins Ave. watermain near the same location. The isolation valve for this work is located in the valve chamber. This will permit the dead end watermain on Stanley St. to be kept live during other works.
- (c) Plug and abandon existing 250mm Princess St. watermain at the south limit of Higgins Ave. and 5.0m north of the north limit of Higgins Ave.
- (d) Install 300mm Higgins Ave. watermain from the proposed 300mm gate valve at station 0+824 (near the east limit of Stanley St.) to the gate valve at station 1+003.06 (near the west limit of King St.).
- (e) Install 250mm Princess Ave. watermain from the Higgins Ave. watermain connection north to the proposed 45° bends north of the north limit Higgins Ave.
- (f) Complete flushing, hydrostatic leakage testing and disinfection of this section of watermain.
- (g) Complete the final connections at the north and south limits of Princess St. and at the west limit of King St. Complete any service connections.

E14.1.3 Stage 3: Higgins Avenue and Stanley Street Intersection

- (a) Install temporary 300mm plug at the west limit of the Higgins Ave. watermain renewal at station 0+ 795.83
- (b) Remove existing hydrant on the 150mm watermain at the south west corner of Higgins Ave. and Stanley St.
- (c) Install 300mm Higgins Ave. watermain from station 0+797 (near the east limit of Stanley St.) to the proposed gate valve at station 0+824.4 (near the west limit of Stanley St.).
- (d) Install 200mm Stanley St. watermain from new Higgins Ave. 300mm watermain north to the 45° bend 9.0m north of the north limit of Higgins Ave.
- (e) Complete flushing, hydrostatic leakage testing and disinfection of this section of watermain.
- (f) Complete the final connections at the north and south limits of Stanley St. and at to the 150 and 300mm watermains at the west limit of the Higgins Ave. watermain renewal. Complete any service connections.

PART F - SECURITY CLEARANCE

F1. SECURITY CLEARANCE

- F1.1 Each individual proposed to perform the following portions of the Work:
- (a) any Work on private property;
 - (b) communicating with residents and homeowners in person or by telephone;
- F1.2 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 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: <http://www.commissionaires.mb.ca/> .
- F1.3 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.
- F1.4 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.
- F1.5 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.
- 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 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.