



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 72-2018

2018 WATER MAIN RENEWALS – MCPHILLIPS STREET & SHERBROOK STREET

NOTE TO BIDDERS: PLEASE BE AWARE OF REVISIONS TO B14.4

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 2018 WATER MAIN RENEWALS – MCPHILLIPS STREET & SHERBROOK STREET

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, March 6th, 2018.

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.

B3.2 The Bidder is advised that before submitting a Bid, each Bidder may, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to subsurface or physical conditions at or contiguous to the Site or otherwise, which may affect cost, progress, performance, or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.

B3.3 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.

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. CONFIDENTIALITY

B5.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

(a) was known to the Bidder before receipt hereof; or

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

B5.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.

B6. ADDENDA

B6.1 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.

B6.2 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.

B6.2.1 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>

B6.2.2 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.

B6.3 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.

B7. SUBSTITUTES

B7.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.

B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B7.3 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.

B7.4 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.

- B7.5 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.
- B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 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 B17.
- B7.9 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.

B8. BID COMPONENTS

- B8.1 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;
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 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.
- B8.4 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.
- B8.4.1 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.
- B8.5 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.
- B8.6 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 B17.1(a).
- B8.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B8.8 Bids shall be submitted to:
The City of Winnipeg

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

B9. BID

- B9.1 The Bidder shall complete Form A: Bid, making all required entries.
- B9.2 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.
- B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.
- B9.3 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.
- B9.4 Paragraph 13 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.
- B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B9.5 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.

B10. PRICES

- B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B10.2 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.
- B10.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B11. DISCLOSURE

B11.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B11.2 The Persons are:

- (a) Alliance Underground Inc.
- (b) EMCO Ltd.

B12. QUALIFICATION

B12.1 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.

B12.2 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>

B12.3 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, provide the Security Clearances in accordance with Part F – Security Clearances.

B12.4 Further to B12.3, the Bidder and/or any proposed Subcontractor undertaking the installation of water main, shall within three (3) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator to demonstrate the following qualifications and as indicated on (Form L: Contractor Qualifications and Experience):

- (a) A minimum of two (2) successful 350mm or larger water main renewal projects completed in the last 7 years utilizing the proposed water main installation method required for this project.
- (b) A minimum of two (2) successful 350mm or larger water main renewal projects completed in the last 7 years for the project Superintendent proposed for this Work utilizing the proposed water main installation method required for this project.

B12.5 Further to B12.3(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) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) or
 - (i) a copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued 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
 - (ii) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) 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/>.)

B12.6 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.

B12.7 The Bidder shall provide, on request of the Contractor Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contractor Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B13. BID SECURITY

B13.1 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.

B13.1.1 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.

B13.1.2 All signatures on bid securities shall be original.

B13.1.3 The Bidder shall sign the Bid Bond.

B13.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.

B13.2 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.

B13.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B13.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.

B13.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.

B13.3 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.

B14. OPENING OF BIDS AND RELEASE OF INFORMATION

B14.1 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.

B14.1.1 Bidders or their representatives may attend.

B14.1.2 Bids determined by the Manager of Materials, or his/her designate, to not include the bid security specified in B13 will not be read out.

B14.2 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/>

B14.3 After award of Contract, the name(s) of the successful Bidder(s), their address(es) 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/>

B14.4 The Bidder is advised that any information contained in any Bid may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).

B14.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

B15. IRREVOCABLE BID

B15.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.

B15.2 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.

B16. WITHDRAWAL OF BIDS

B16.1 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.

B16.1.1 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.

B16.1.2 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 13 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

- B16.1.3** 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 13 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B16.1.3(b), declare the Bid withdrawn.

B16.2 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 B15.2 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.

B17. EVALUATION OF BIDS

- B17.1** 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 B12 (pass/fail);
 - (c) Total Bid Price;
 - (d) Economic analysis of any approved alternative pursuant to B7.
- B17.2** Further to B17.1(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.
- B17.3** Further to B17.1(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.
- B17.4** Further to B17.1(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.
- B17.4.1** Further to B17.4, 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.

B18. AWARD OF CONTRACT

- B18.1** The City will give notice of the award of the Contract or will give notice that no award will be made.
- B18.2** 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.
- B18.2.1** Without limiting the generality of B18.2, 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.

B18.3 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 B17.

B18.3.1 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.

FORM L: CONTRACTOR QUALIFICATIONS AND EXPERIENCE

(See B12)

WATER MAIN INSTALATION – INSTALLATION CONTRACTOR

Attach additional resumes and documents as required.

1. Project References: Installation Contractor

Project Client/Contract: _____

(Name)

(Address)

(Phone)

(Email)

<u>Year</u>	<u>Description of Project, including size and type of pipe</u>	<u>Value</u>

2. Project References: Installation Contractor

Project Client/Contract: _____

(Name)

(Address)

(Phone)

(Email)

<u>Year</u>	<u>Description of Project, including size and type of pipe</u>	<u>Value</u>

3. Project References: Installation Contractor

Project Client/Contract: _____

(Name)

(Address)

(Phone)

(Email)

<u>Year</u>	<u>Description of Project, including size and type of pipe</u>	<u>Value</u>

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 various water mains in the City of Winnipeg

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

- (a) Installation of approximately 500 meters of 150mm to 500mm PVC water main by trenchless methods;
- (b) Installation of cast iron and PVC water main fittings
- (c) Implementation of traffic control plan;
- (d) Abandonment and removal of existing water mains, valves, and hydrants;
- (e) Installation of hydrant assemblies and gate valves;
- (f) Reconnection or renewal of water service connections;
- (g) Hydrostatic pressure testing of the new water mains;
- (h) Disinfection of the new water mains;
- (i) Final tie-ins of water mains; and
- (j) Restoration of pavement and boulevard areas.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is KGS Group Consulting Engineers, represented by:
Ray Offman M Sc, (CE) P.Eng
Infrastructure Engineer/Project Manager

Telephone No. 204-896-1209
Email Address roffman@kgsgroup.com

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

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, 0 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator 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:
- The City of Winnipeg
Attn: Chief Financial Officer
Office of the Chief Administrative Officer
Susan A. Thompson Building
2nd Floor, 510 Main Street
Winnipeg MB R3B 1B9
- 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
- D6.5 Bids Submissions must not be submitted to the above facsimile number. Bids must be submitted in accordance with B8.**

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 B13.1(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. SUBCONTRACTOR LIST

D12.1 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.

D13. DETAILED WORK SCHEDULE

D13.1 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.

D13.2 The detailed work schedule shall consist of the following:

(a) a Gantt chart for the Work acceptable to the Contract Administrator

D13.3 Further to D13.2, the schedule shall clearly identify the start and completion dates of all of the following activities/tasks making up the Work as well as showing those activities/tasks on the critical path. For each block of water main renewals include:

- (a) Commencement Date;
- (b) Traffic control with phase plan;
- (c) Installation of temporary services;
- (d) Testing of temporary services;
- (e) Construction of water main renewals;
- (f) Pressure Testing and Disinfections;
- (g) Final tie-ins;
- (h) Pavement restorations;
- (i) Boulevard restorations;

D13.4 Further to D13.3, the initial schedule submitted may include the detailed tasks for the initial street or streets upon which the Contractor intends to commence, and general detail of the schedule for the remaining streets. At least 5 working days prior to commencing a new street, the Contractor shall submit a detailed schedule for the upcoming street, including all tasks identified in D13.3.

SCHEDULE OF WORK

D14. EXPEDITED SHOP DRAWINGS AND UTILITY LOCATES

D14.1 Further to E8, in order to expedite Shop Drawings with critical timeliness, the lowest responsive Bidder, as outlined in B15, will be permitted, after receiving written approval from the Contract Administrator, to arrange for the preparation of Shop Drawings for, at minimum, the following items with critical timelines:

- (a) 500 mm fittings and thrust blocks as indicated on drawings
- (b) 500 mm tie in connections

D14.2 In order to expedite utility locates on sites with critical timeliness, the lowest responsive Bidder, as outlined in B15, will be permitted, after receiving written approval from the Contract Administrator, to arrange for utility locates for the following sites with critical timelines:

(a) McPhillips Street Site

D14.3 If Award is made to the lowest responsive Bidder, no payment for the booking of utility locates will be made.

D14.4 If no Contract is awarded, then the City of Winnipeg will pay the requested Bidder up to a maximum of five hundred (\$500.00) for each of the requested submissions as per D14.1 for the preparation and delivery of Shop Drawings and as per D14.2 for the booking of utility locates. Delivery of the Shop Drawings to the City, booking of Utility Locates, and payment of the above mentioned amounts will constitute full and final consideration of each party to the other, and neither party will have any further liability to the other with respect to this Bid Opportunity.

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 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; and
- (vi) the Subcontractor list specified in D12.

(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.

D15.3 The McPhillips Street water main renewal Works shall be the first site initiated as part of the Work.

D15.4 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent and upon approval of the Contract Administrator.

D15.5 Further to D15.4, the Contractor shall commence soft digging Works, as specified on the Drawings, within seven (7) days of Award of the Contract and upon approval of the Contract Administrator.

D16. SCHEDULE RESTRICTIONS

D16.1 Water Main and Feeder Main Shutdowns

(a) Water Main and Feeder Main shutdown periods are based on a number of factors including routine maintenance and repair work along the Water Main and Feeder Main and adjacent regional water distribution system, water demand, weather, reservoir operation and other factors. The City shall endeavour to make the specified time periods available to the contractor to schedule his work requiring removal of the Water Main and Feeder Main from service, without limiting the City's control over the operation of the Water Main and Feeder Main and the regional water infrastructure system, to complete other work, maintain adequate water supply and storage of water and maintain the integrity of 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 the water supply, including but not limited to high water demand, abnormal weather, and failures of related water system components and/or security concerns.

- (b) The Contractor shall note that it is intended to allow for depressurization of the Feeder Main during the construction period, for installation of the tie-ins, to safeguard against a catastrophic failure of the pipeline. During normal summer demands, it is anticipated that the Feeder Main can be taken out of service, with minimal disruption to water service level. However, it is noted that during high water demand season, typically between May 18 and September 15, the risk of an emergency reinstatement of the Feeder Main is elevated.
- (c) The Contractor shall note that longer term shutdown periods of great than eight (8) hours in duration that require drainage of the Feeder Main will only be permitted during periods of low water demands, typically between September 15 and May 18. Scheduling of work outside of this window may be permitted by the Contract Administrator, subject to review of demand forecasts, approval of the Water and Waste Department, receipt of detailed work planning and contingency plan.
- (d) The Contractor shall note that short term shutdown periods of less than eight (8) hours in duration that do not require drainage of the Feeder Main will be permitted, subject to receipt of specified notification to the Contract Administrator. Such shutdowns may be limited to off-peak periods of the day.
- (e) The Contractor shall note that during portions of the Work involving removal of Feeder Main from service, including depressurization of draining of the Feeder Main, the Contractor shall be prepared to take immediate actions to be prepared to return the Feeder Main to service, upon limited to backfill of adjacent trenches in close proximity to the Feeder Main, re-installation of and piping or appurtenances removed for construction and installation of bracing as directed.

D17. WORK BY OTHERS

- D17.1 Work by others on or near the Site will include but not necessarily be limited to:
- (a) Dillon Consulting – Road Reconstruction following water main work on McPhillips Street
 - (b) Stantec Consulting – Road Rehab following water main work on Sherbrook Street
 - (c) Telus – Relocation of Fiber Optic line at North Tie-In on McPhillips Street in coordination with Contractor.

D18. SEQUENCE OF WORK

- D18.1 Further to C:6.1, the sequence of Work shall be as follows
- (a) The McPhillips Street Works shall be the first site initiated as part of the Work.
 - (b) Work on McPhillips Street shall start at Logan Avenue and progress north to Higgins Avenue in coordination with the Phase 1/Phase 2 Traffic Plan (see drawings)
 - (i) Phase 1 – Logan Avenue to North side of Valve By-Pass Assembly on Higgins Avenue
 - (ii) Phase 2 – Higgins Avenue to North Tie-In +/- 50m North of Higgins Avenue

D19. SUBSTANTIAL PERFORMANCE

- D19.1 The Contractor shall achieve Substantial Performance within thirty-five (35) consecutive Working Days of the commencement of the Work as specified in D15.
- D19.2 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.
- D19.3 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.

D20. TOTAL PERFORMANCE

- D20.1 The Contractor shall achieve Total Performance within forty (40) consecutive Working Days of the commencement of the Work as specified in D15.
- D20.2 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.
- D20.3 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.

D21. LIQUIDATED DAMAGES

- D21.1 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 City 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 - two thousand dollars (\$2000);
 - (b) Total Performance – eight hundred dollars (\$800).
- D21.2 The amounts specified for liquidated damages in D21.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Substantial Performance or Total Performance by the days fixed herein for same.
- D21.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D22. COOPERATION WITH OTHERS

- D22.1 Further to C6.25, the Contractor's attention is directed to the fact that other Contractors, the personnel of other utilities and staff of the City of Winnipeg will be working in the areas on or adjoining the site. The activities of these agencies may coincide with the Contractor's execution of the Work, and it will be the Contractor's responsibility to cooperate to the fullest extent with personnel working in the area, and such cooperation is an obligation of the Contractor under the terms of this contract.

D23. SCHEDULED MAINTENANCE

- D23.1 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 CW3510;
- D23.2 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

D24. JOB MEETINGS

- D24.1 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.

D24.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D25. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D25.1 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).

D26. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

D26.1 Further to B12.5, 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 B12.5.

MEASUREMENT AND PAYMENT

D27. PAYMENT

D27.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D28. WARRANTY

D28.1 Warranty is as stated in C13.

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. 72-2018

2018 WATER MAIN RENEWALS – MCPHILLIPS STREET & SHERBROOK STREET

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. 72-2018

2018 WATER MAIN RENEWALS – MCPHILLIPS STREET & SHERBROOK STREET

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>
D-14975	COVER SHEET
D-14976	DRAWING INDEX, DESIGN NOTES, LEGEND & ABBREVIATIONS
D-14977	2018 WATER MAIN RENEWALS - MCPHILLIPS STREET - LOGAN AVENUE TO ±50m NORTH OF HIGGINS AVENUE - LOGAN AVENUE TO STA 2+05
D-14978	2018 WATER MAIN RENEWALS - MCPHILLIPS STREET - LOGAN AVENUE TO ±50m NORTH OF HIGGINS AVENUE - STA 2+05 TO STA 3+05
D-14979	2018 WATER MAIN RENEWALS - MCPHILLIPS STREET - LOGAN AVENUE TO ±50m NORTH OF HIGGINS AVENUE - STA 3+05 TO ±50m NORTH OF HIGGINS AVENUE
D-14980	2018 WATER MAIN RENEWALS - MCPHILLIPS STREET - TRAFFIC MANAGEMENT PLAN PHASE 1
D-14981	2018 WATER MAIN RENEWALS - MCPHILLIPS STREET - TRAFFIC MANAGEMENT PLAN PHASE 2
D-14982	2018 WATER MAIN RENEWALS - SHERBROOK STREET - NOTRE DAME AVENUE TO MCDERMOT AVENUE - NOTRE DAME AVENUE TO STA 1+75
D-14983	2018 WATER MAIN RENEWALS - SHERBROOK STREET - NOTRE DAME AVENUE TO MCDERMOT AVENUE - STA 1+75 TO MCDERMOT AVENUE
D-14984	2018 WATER MAIN RENEWALS – SGERBROOK STREET - TRAFFIC MANAGEMENT PLAN

E2. GENERAL REQUIREMENTS

E3. RESTORATIONS

- E3.1 Further to Section 3.3 of CW 1130 of the General Requirements, permanent surface restorations including all sodding and pavement works for each renewal site shall be completed within ten (10) working days from the date that the renewal is completed.
- E3.2 All concrete pavement restorations shall be performed using 24-hour early opening concrete.

E4. PROVISIONAL ITEMS

- E4.1 The Provisional Items listed in the Schedule of Prices are a part of the Contract.
- E4.2 The Contractor shall not perform Work included in the Provisional Items without prior authorization from the Contract Administrator. All Work included in the Provisional Items will be carried out within the construction areas shown on the drawings.
- E4.3 Notwithstanding C7, the City reserves the right to diminish all or any portion of the items of Work listed in the Provisional Items and no claim shall be made for damages on grounds of loss of anticipated profit or for any other reason.

E5. TRAFFIC MANAGEMENT

- E5.1 Traffic control shall be carried out in accordance with clause 3.7 of CW 1130.
- E5.2 Further to D25.1, should Public Works or the Water and Waste Department require that Work be carried out at night, on Sundays, 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 the requirements.
- E5.3 Further to E5.1 and E5.2 construction activities shall be restricted as follows:
- (a) Traffic closures on McPhillips Street: Phase 1 – Logan Avenue to Jarvis Avenue – McPhillips Street northbound curb lane and northbound median lane closed to traffic. One lane of northbound traffic flow and one lane of southbound traffic flow required at all times.
 - (b) Traffic closures on McPhillips Street: Phase 2 – Logan Avenue to Jarvis Avenue – McPhillips Street northbound curb lane and southbound median lane closed to traffic. One lane of northbound traffic flow and one lane of southbound traffic flow required at all times.
 - (c) Traffic closures on Sherbrook Street – Bannatyne Avenue to Notre Dame Avenue – Sherbrook Street northbound curb lane and northbound median lane closed to traffic. One lane of northbound traffic flow and one lane of southbound
- E5.4 Maintain access to private approaches at all times.
- E5.5 Further to Section 3.6 of CW 1130 of the General Requirements, the Contractor shall maintain safe pedestrian crossing at intersections at all times.
- (a) Except as noted below, if possible, only one pedestrian crossing at an intersection is to be blocked 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.
 - (b) 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.
- E5.5.1 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 intersections.

E6. PROTECTION OF EXISTING TREES

- E6.1 The Contractor shall take the following precautionary steps to avoid damage from his construction activities to existing boulevard trees within and adjacent to the limits of construction:
- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of any tree.
 - (b) Mature tree trunks shall be strapped with 25 x 150 x 2400 (1" x 6" x 8") wood planks. Smaller trees shall be similarly protected using appropriately sized wood planks.
 - (i) Excavations shall be carried out in such a manner so as to minimize damage to existing root systems. Roots over 50 mm in diameter that must be cut to facilitate an excavation shall be neatly pruned with a saw prior to excavation and coated with an appropriate wound dressing to prevent infection.
 - (ii) Work on site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to tree branches does occur, the Contractor shall neatly prune the damaged branch.
 - (c) American elm trees are not to be pruned between April 1st and August 1st and Siberian elm trees between April 1st and July 1st of any year under provisions of The Dutch Elm Disease Act.
- E6.2 All damages to existing trees caused by the Contractor's construction activities shall be repaired to the requirements and satisfaction of the City of Winnipeg, Parks and Open Space Division, Urban Forestry Branch.
- E6.3 No separate measurement or payment will be made for protection of trees. It shall be considered incidental to the Contract Work.

E7. PARTIAL SLAB PATCHES

- E7.1 Partial Slab Patches shall be constructed, measured and paid for as per CW 3230 except that no differentiation will be made for class of patch. Furthermore, 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.

E8. MISCELLANEOUS CONCRETE SLAB RENEWALS - SIDEWALKS

- E8.1 Construct 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 for "Miscellaneous Concrete Slab Renewals – Sidewalk" in Form B of the Bid Submission.

E9. CONCRETE CURB RENEWALS

- E9.1 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.

E10. ASPHALTIC CONCRETE PATCHES TYPE 1A

- E10.1 Further to CW 3410 there will be no maximum width for an asphalt patch. All cost incurred for sub base and base course materials shall be included in the Contract Unit Price for "Construction of Asphalt Patches" in Form B of the Bid Submission.

E11. WATER SERVICE INTERRUPTIONS TO BUSINESSES, APARTMENT BUILDINGS

- E11.1 The Contractor may be required to work evenings, nights and weekends where required to minimize water service interruptions on this project

- E11.2 The Contractor shall work closely with the Contract Administrator and the City to coordinate service connections and tie-ins to minimize the disruptions of water service to all properties in the area.
- E11.3 The Contractor shall be required to submit a work plan satisfactory to the Contract Administrator seven (7) days prior to any construction activities to illustrate how the work will be performed to minimize or eliminate water shut downs for this project. The plan will be reviewed by the Contract Administrator and revised by the Contractor as required.
- E11.4 No additional payment will be made for measures taken to minimize water services disruptions.

E12. WORK PRACTICES ON ASBESTOS-CEMENT PIPE

- E12.1 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:
- E12.1.1 "Work Practices for Asbestos-Cement Pipe", AWWA No. M16, published by the American Water Works Association.
- E12.1.2 "Recommended Work Practices for AC Pipe", 1977, published by the AC Pipe Producers Association.

E13. WATER USED ON CITY OF WINNIPEG CONSTRUCTION PROJECTS

- E13.1 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 by the City of Winnipeg. The billing for water usage sent to the Contractor shall be forwarded to the Contract Administrator for payment by the City of Winnipeg. The Bid Opportunity number shall be noted on each permit.

E14. INSTALLATION OF FEEDER MAINS

- E14.1 Description
- E14.1.1 This Specification shall supplement the requirements of CW 2110.
- E14.2 Clean pipes, fittings, valves, and appurtenances of accumulated debris and water before installation. Carefully inspect materials for defects to approval of Contract Administrator. Remove defective materials from site.
- E14.3 PVC Pipe Installation
- (a) Pipe installation: to AWWA C605 and CW 2110 for PVC pipe.
 - (b) Bevel or taper ends of PVC pipe to match fittings.
 - (c) Handle pipe by approved methods. Do not use chains or cables passed through pipe bore so that weight of pipe bears on pipe ends.
 - (d) Lay pipes on prepared bed, true to line and grade. Ensure barrel of each pipe is in contact with shaped bed throughout its full length. Remove and replace defective pipe. Correct pipe which is not in true alignment or grade or pipe which shows differential settlement after installation
 - (e) Face socket ends of pipe in direction of laying. For mains on a grade of 2% or greater, face socket ends up-grade.
 - (f) Do not exceed permissible deflection at joints as recommended by pipe manufacturer
 - (g) Keep jointing materials and installed pipe free of dirt and water and other foreign materials. Whenever work is stopped, install a removable watertight bulkhead at open end of last pipe laid to prevent entry of foreign materials.

- (h) Position and join pipes with equipment and methods approved by Contract Administrator. Do not use excavating equipment to force pipe sections together.
- (i) Cut pipes in an approved manner as recommended by pipe manufacturer, without damaging pipe or its coating and to leave smooth end at right angles to axis of pipe.
- (j) Align pipes carefully before jointing.
- (k) Install gaskets to manufacturer's recommendations. Support pipes with hand slings or crane as required to minimize lateral pressure on gasket and maintain concentricity until gasket is properly positioned.
- (l) Avoid displacing gasket or contaminating with dirt or other foreign material. Gaskets so disturbed or contaminated shall be removed, cleaned, lubricated and replaced before jointing is attempted again.
- (m) Complete each joint before laying next length of pipe.
- (n) Minimize deflection after joint has been made.
- (o) Apply sufficient pressure in making joints to ensure that joint is completed to manufacturer's recommendations.
- (p) Ensure completed joints are restrained by compacting bedding material alongside and over installed pipes or as otherwise approved by Contract Administrator.
- (q) When stoppage of work occurs, block pipes in an approved manner to prevent creep during down time.
- (r) Do not lay pipe on frozen bedding.
- (s) Areas to be backfilled are to be free from debris, snow, ice, water and frozen ground.
- (t) Do not use backfill material, which is frozen or contains ice, snow or debris.
- (u) Protect valves and appurtenances from freezing.
- (v) Upon completion of pipe laying and after Contract Administrator has inspected work in place, surround and cover pipes between joints with approved granular material placed to dimensions indicated or directed by Contract Administrator.
- (w) Hand place pipe zone material in uniform layers not exceeding 150 mm thick to minimum 300 mm over top of pipe. Do not dump material directly on top of pipe.
- (x) Place layers of pipe zone uniformly and simultaneously on each side of pipe to prevent lateral displacement of pipe
- (y) Compact each layer to Section CW2030 - Excavation Bedding and Backfill.
- (z) Backfill remainder of trench.

E14.4 Frost Conditions

- (a) No pipe shall be laid upon a foundation into which frost has penetrated, nor at any time when the Contract Administrator shall deem that there is danger of the formation of ice or the penetration of frost at the bottom of the excavation. Every precaution must be taken to prevent frost from penetrating the ground to depths below the foundations during construction. Any pipe which, in the opinion of the Contract Administrator, shall have been injured through neglect of this provision of the specifications, shall be removed and made good by the Contractor and at the Contractor's expense.
- (b) Heating of the pipe, sand and gaskets shall commence when the ambient temperature falls below -5 C. The pipe shall be heated throughout with a low heat immediately prior to installation (warm to the touch).

E14.5 Thrust Blocks

- (a) Thrust blocks shall be installed at all tees, wyes, elbows, bends, plugs, reducers and crosses and at locations shown on the Drawings. Thrust blocks shall consist of concrete as specified in Specification CW2160 and shall be installed as shown on the Drawings. The thrust block shall bear against undisturbed soil and the soil shall be cut smooth and at the

proper angle to the pipe. No horizontal struts or braces required for trench bracing shall remain in the concrete thrust block. A bond breaker consisting of 0.20 millimetre (8 mil) polyethylene sheeting shall be installed between fittings, valves, or plugs and the concrete of the thrust block to allow future removal of the thrust block without disturbing the fitting, valve or plug. Before any concrete is placed, all thrust block formwork shall be inspected and approved by the Contract Administrator.

(b) The following tables shall supplement the requirements of CW 2110.

CONCRETE THRUST BLOCKS FOR HORIZONTAL BENDS (SD-004)

NOMINAL PIPE SIZE (mm)	Tee (m ²)	BENDS			
		11.25° (m ²)	22.5° (m ²)	45° (m ²)	90° (m ²)
500	2.68	1.04	2.52	3.64	4.92

CONCRETE THRUST BLOCKS FOR VERTICAL BENDS (SD-005)

NOMINAL PIPE SIZE (mm)	BENDS		
	11.25° (m ³)	22.5° (m ³)	45° (m ³)
500	2.29	3.55	7.41

E15. VERIFY CONNECTIONS TO EXISTING PIPES

- E15.1 The Works include connecting the new McPhillips Street Feeder Main to the existing 500 mm diameter Feeder Main on the west side of McPhillips Street at the north extent of the project site.
- E15.2 The Contractor shall expose the pipe at the proposed connection location to verify the actual horizontal/vertical alignment of the existing pipe, location of the nearest existing joint to the proposed tie in location, and determine the configuration and requirements of the tie-in.
- E15.3 The Contractor is responsible to procure the appropriate transition coupling necessary to make the connection as outlined on the Drawings.
- E15.4 Contractor shall submit Shop Drawings to the Contract Administrator for review prior to ordering any couplings or restraints.
- E15.5 Adequate procurement time shall be allowed for manufacture and delivery of any transition couplings and restraints so as not to delay the project.
- E15.6 Once the connection location and required materials are confirmed, the Contractor shall reinstate and/or repair the examined joints to the satisfaction of the City, and backfill any excavations made to expose the pipe.
- E15.7 The Contractor is responsible to ensure that the site is safe and secure between the time that the connections are verified, and the time that construction commences on the connections.
- E15.8 No separate measurement or payment will be made for Verify Connections to Existing Pipes, and will be considered incidental to the Works of the project.

E16. HYDROSTATIC AND LEAKAGE TESTING

- E16.1 The contractor is responsible for a successful pressure test.

- E16.2 Both a hydrostatic pressure test and a leakage test to be performed. Do tests in accordance with:
- (a) AWWA C605 for PVC pipe
- E16.3 Notify Contract Administrator at least 24 h in advance of all proposed tests. Contractor to confirm that test sections will maintain pressure prior to Contract Administrator being on-site. Perform all subsequent tests in presence of Contract Administrator.
- E16.4 No testing is allowed during freezing weather, unless approved by the Contract Administrator. In such case, the Contractor shall protect valves, joints and fittings, ditch, road surface and including the test area free from ice.
- E16.5 The Contractor shall:
- (a) Provide labour, equipment and materials required to perform hydrostatic and leakage tests hereinafter described,
- (b) Arrange and coordinate supply of potable water for hydrostatic and leakage testing. City will supply potable water required for hydrostatic testing,
- (c) Where any section of system is provided with concrete thrust blocks, conduct tests at least 5 days after placing concrete,
- (d) Expel air from the pipe by slowly filling the pipe with potable water. Install corporation stops at any high points in the pipe where no air-vacuum release valves are installed. Remove stops after satisfactory completion of test and seal holes with plugs,
- (e) Remove any pipe, fittings and appurtenances found defective and replace with new sound material and make watertight,
- (f) Repeat hydrostatic test until all defects have been corrected. Contractor is responsible for all costs on repeat tests.
- E16.6 Pipe will be tested only after complete backfilling of trench.
- E16.7 Leave valves, joints and fittings exposed.
- E16.8 Strut and brace caps, bends, tees, and valves, to prevent movement when test pressure is applied.
- E16.9 The leakage test for PVC pipe is to be performed. To pass the leakage test, the volume of makeup water must not exceed the calculated volume of allowable makeup water as per the following table.

Allowable Makeup for PVC Plastic Pipe with Elastomeric Joints (Litres per Hour)

Nominal Pipe Size (mm)	345 kPa (50 psi)	690 kPa Average Test (100 psi)	1035 kPa Pressure (150 psi)	1380 kPa (200 psi)
	Allowable Markup Per 50 Joints (305m)			
500	3.63	5.11	6.28	7.23

E17. FLUSHING AND DISINFECTION OF FEEDER MAINS

- E17.1 Flushing and Disinfection shall be done according to CW2125.
- E17.2 Contractor shall be responsible for collection and delivery of the water sample for the bacteriological samples of all three sections according to the latest AWWA standards.

E18. SHOP DRAWINGS

E18.1 Description

- (a) This Specification shall revise, amend and supplement the requirements of CW 1110.
 - (i) The term 'shop drawings' means drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data, including Site erection drawings which are to be provided by the Contractor to illustrate details of a portion of the Work.
 - (ii) The Contractor shall submit specified shop drawings to the Contract Administrator for review. All submissions must be in metric units. Where data is in imperial units, the correct metric equivalent shall also be show on all submissions for Engineering review.
 - (iii) Provision of Shop Drawings will be considered incidental to the price for supply and delivery of equipment and materials.
- (b) Shop Drawings
 - (i) Original drawings are to be prepared by Contractor, Subcontractor, Supplier, Distributor, or Manufacturer, which illustrate appropriate portion of Work; showing fabrication, layout, setting or erection details as specified in appropriate sections
 - (ii) Shop drawings for the following structural components shall bear the seal of a registered Engineer in the Province of Manitoba.
 - ◆ Reinforcing steel.
 - ◆ Metal Fabrications.
- (c) Contractor's Responsibilities
 - (i) Review shop drawings, product data and samples prior to submission and stamp and sign drawings indicating conformance to the Contract requirements.
 - (ii) Verify:
 - ◆ Field Measurements
 - ◆ Field Construction Criteria
 - ◆ Catalogue numbers and similar data
 - (iii) Coordinate each submission with requirements of Work and Contract Documents. Individual shop drawings will not be reviewed until all related drawings are available.
 - (iv) Notify Contract Administrator, in writing at time of submission, of deviations from requirements of Contract Documents.
 - (v) Responsibility for deviations in submission from requirements of Contract Documents is not relieved by Contract Administrator's review of submission, unless Contract Administrator gives written acceptance of specified deviations.
 - (vi) Responsibility for errors and omissions in submission is not relieved by Contract Administrator's review of submittals.
 - (vii) The Contractor shall make any corrections required by the Contract Administrator and shall resubmit the required number of corrected copies of Shop Drawings. The Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections requested by the Contract Administrator on previous submission.
 - (viii) After Contract Administrator's review and return of copies, distribute copies to subtrades as appropriate.
 - (ix) Maintain one (1) complete set of reviewed shop drawings, filed by Specification Section Number, at the Site of the Work for use and reference of the Contract Administrator and Subcontractors.
- (d) Submission Requirements
 - (i) Schedule submissions at least 7 Calendar Days before dates reviewed submissions will be needed, and allow for a 7 Calendar Day period for review by the Contract

Administrator of each individual submission and re-submission, unless noted otherwise in the Contract Documents.

- (ii) Submit one original print and one digital PDF copy of shop drawings. The Contractor is advised that the Contract Administrator will retain the original copy and return one digital PDF copy to the Contractor
- (iii) Accompany submissions with transmittal letter, containing:
 - ◆ Date
 - ◆ Project title and Bid Opportunity number
 - ◆ Contractor's name and address
 - ◆ Number of each shop drawing, product data and sample submitted
 - ◆ Specification Section, Title, Number and Clause
 - ◆ Drawing Number and Detail/Section Number
 - ◆ Other pertinent data
- (iv) Submissions shall include:
 - (a) Date and revision dates.
 - (b) Project title and Bid Opportunity number.
 - (c) Name of:
 - (a) Contractor
 - (b) Subcontractor
 - (c) Supplier
 - (d) Manufacturer
 - (e) Separate detailer when pertinent
 - (d) Identification of product of material.
 - (e) Relation to adjacent structure or materials.
 - (f) Field dimensions, clearly identified as such.
 - (g) Specification section name, number and clause number or drawing number and detail/section number.
 - (h) Applicable standards, such as CSA or CGSB numbers.
 - (i) Contractor's stamp, initialed or signed, certifying review of submission, verification of field measurements and compliance with Contract Documents.
- (e) Other Considerations
 - (i) Fabrication, erection, installation or commissioning may require modifications to equipment or systems to conform to the design intent. Revise pertinent shop drawings and resubmit.
 - (ii) Material and equipment delivered to the Site of the Works will not be paid for at least until pertinent shop drawings have been submitted and reviewed.
 - (iii) Incomplete shop drawing information will be considered as stipulated deductions for the purposes of progress payment certificates.
 - (iv) No delay or cost claims will be allowed that arise because of delays in submissions, re-submissions and review of shop drawings.

E19. TREE REMOVAL

E19.1 Description

E19.1.1 This specification shall cover the removal of existing trees.

E19.1.2 The Work to be done by the Contractor under this specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.

E19.2 Materials

E19.2.1 Existing Trees to be Removed

The existing trees to be removed include, but not limited to ash, elm, cottonwood, basswood, oak, pine, maple, spruce, etc., all of which may be cut with standard chain saw equipment. The existing trees range from 50 mm to 1,000 mm diameter.

E19.3 Construction Methods

E19.3.1 Prior to commencement of the Work the Contract Administrator shall identify all trees for removal. The Contractor shall cut down only trees designated to be removed, and grub out all stumps and roots greater than 100 mm diameter. In general, the Contractor shall start at the top of the tree and remove branches or trunks not longer than 2 m. Trees are to be felled so as to land within the limits of the Works. The Contractor shall load and haul all trees, stumps, roots, logs, brush, rubbish and all other surface litter from the Site and dispose of these materials at an approved disposal Site, acceptable to the Contract Administrator.

E19.3.2 The Contractor shall take all precautions to prevent damage to structures, adjacent property and to trees and shrubs. In the event of damage, the Contractor will be held liable, and shall be required to provide appropriate restoration at his cost, to the satisfaction of the Contract Administrator.

E19.3.3 Any trees damaged during construction activities shall be examined by a bonded tree care professional and pruned as required. Damaged trees which are not viable shall be replaced by the Contractor at his own cost.

E19.4 Measurement and Payment

E19.4.1 The removal of existing trees shall be measured on a per tree basis and paid for at the Contract Unit Price per unit for the "Items of Work" listed below. The amount to be paid shall be the total number of trees removed in accordance with this specification, accepted and measured by the Contract Administrator.

Items of Work: Tree Removal

i. 50 mm to 249 mm Diameter

ii. 250 mm to 500 mm Diameter

iii. Greater than 500 mm Diameter

E19.4.2 The removal of trees and brush less than 50 mm diameter is considered incidental to the Work and no separate measurement or payment will be made.

E20. TREE REVEGETATION

E20.1 Description

- (a) This Specification shall cover the installation of new trees to replace trees removed as a direct requirement of the Work shown on the Drawings.
- (b) The work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead labour, materials, and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.
- (c) The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification.

E20.2 Materials

- (a) Trees
 - (i) Trees shall consist of native species approximately 75 mm in diameter. The number and species of trees to be planted will be based on the number and species of trees removed during construction and will be determined by the Contract Administrator.

- (b) Tree species specific to the Site include:
 - (i) Manitoba Maples
 - (ii) Green Ash
 - (iii) American Elm
 - (iv) Basswood
 - (v) Cottonwood

E20.3 Construction Methods

- (a) Trees
 - (i) The trees shall be planted in the general vicinity of where trees were removed prior to the commencement of works or as directed by the Contract Administrator.
- (b) Quality Control
 - (i) Inspection
 - (a) All workmanship and all materials furnished and supplied under this Specification are subject to close and systematic inspection by the Contract Administrator including all operations from the selection of materials through the final acceptance of the specified work. The Contractor shall be wholly responsible for the control of all operations incidental thereto notwithstanding any inspection of approval that may have been previously given.
 - (ii) Access
 - (a) The Contract Administrator shall be afforded full access for the inspection of materials at the site to determine whether the material is being selected and placed in accordance with this Specification.

E20.4 Measurement and Payment

- (a) Replacement of trees removed as a direct impact of the Work shown on the Drawings will be paid at the Contract unit price of "Tree Revegetation" for each tree planted in accordance with this Specification.

E21. COLD WEATHER REQUIREMENTS

E21.1 Description

- (a) Should any concrete Work be required to be carried out when the mean daily temperature is below 5°C or anticipated to be below 5°C within the next 24 hours, cold weather requirements will be specified herein.
- (b) All freshly placed concrete shall be protected from the elements and from defacements due to construction operations.

E21.2 Construction Methods

- (a) The following are minimum requirements for protecting concrete during and after placement during freezing weather, but mere adherence to these requirements will not relieve the Contractor of the necessity for producing concrete which has not been weakened or injured by frost of freezing, or replacing such damaged Work at no additional expense to the City;
 - (i) Before any concrete is placed, all ice, snow, and frost shall be completely removed from all formwork, and other surfaces against which concrete temperatures of such surfaces raised above 7°C for twenty-four (24) hours minimum prior to concreting. Where concrete Work is to come in contact with the earth, the surface of the earth shall be completely free of frost when concrete is placed thereon.
 - (ii) Concrete aggregates and water shall be heated to not over 80°C. Concrete shall be not less than 20°C or more than 30°C in temperature when deposited. Concrete when placed during freezing weather, or if freezing is anticipated during curing

period, shall be fully enclosed and the temperature of same maintained at not less than 20°C for five (5) days nor less than 5°C for an additional five (5) days.

- (iii) Heating enclosures shall be strong and wind-proof, well ventilated with heating units so located as to prevent local overheating or drying of the concrete or damage from combustion gases. Only indirect fired heaters will be accepted. Units must be vented outside the enclosure. No direct fired units will be accepted.
- (iv) The Contractor shall inform the Contract Administrator well in advance as to the methods of enclosure and frost protection he proposes to employ.

E21.3 Measurement and Payment

- E21.3.1 Cold weather requirements shall be considered incidental to the construction of cast-in-place concrete and no measurement or payment will be made for this item.

E22. TEMPORARY SURFACE RESTORATIONS

- E22.1 The Contractor shall use temporary surface restorations on McPhillips Street in areas approved by the Contract Administrator to prepare for the anticipated road reconstruction.

- E22.2 Further to CW1130 Clause 3.3, where temporary surface restorations must be made to reopen lanes of traffic, the Contractor shall temporarily restore the surface as follows:

- (a) Backfill excavation with Class 1 Backfill extending to the underside of the asphalt or approved equivalent as directed by the Contract Administrator;
- (b) Cap excavation in pavement with a minimum of 50 mm thick layer of asphalt.

- E22.3 The Contractor shall maintain temporary restored surfaces until permanent restoration is complete.

E22.4 Measurement and Payment:

- (a) Temporary Surface Restorations will be measured on an area basis and be paid for at the Contract Unit Price per square meter 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.

E23. WATER SERVICE INTERRUPTIONS TO BUSINESSES AND RESIDENCES

- E23.1 The Contractor may be required to work evenings, nights and weekends where required to minimize water service interruptions on this project.

- E23.2 The Contractor shall work closely with the Contract Administrator and the City to coordinate service connections and tie-ins to minimize the disruptions of water service to all properties in the area.

- E23.3 The Contractor shall be required to submit a work plan satisfactory to the Contract Administrator seven (7) days prior to any construction activities to illustrate how the work will be performed to minimize or eliminate water shut downs for this project. The plan will be reviewed by the Contract Administrator and revised by the Contractor as required.

- E23.4 No additional payment will be made for measures taken to minimize water services disruptions.

E24. ALLOWANCE FOR RELOCATION OF TELECOMMUNICATION LINE

E24.1 Description

- (a) A telecommunication line (owned by Telus) consisting of one 50 mm orange HDPE SDR 11 line passes through the area anticipated to be required for the tie in location and pipe installation at northwest extent of the project. The cable will need to be relocated to

facilitate the construction of the tie in shaft. The exact extent of the relocation will be based on the needs of the Contractor to facilitate construction.

E24.2 Construction

- (a) The Contractor shall arrange for the relocation of the utilities to facilitate the construction for their pipe installation and tie in works.
- (b) The Contractor must coordinate the relocation with the utility owner (Telus).
- (c) The Contractor shall provide one (1) weeks' notice to the Contract Administrator in advance of the planned relocations

E24.3 Measurement and Payment

The cost for coordination and relocation of the Telecommunication line to facilitate construction shall be paid for under the Contract unit price for "Allowance for Relocation of Telecommunication Line". Costs will be based on actual invoiced costs for the relocation with allowable mark-ups in accordance with the General Conditions.

- (a) Costs for coordination or the Work and Traffic control are incidental to Site Development and Restoration.

E25. PRE-CONSTRUCTION EXPLORATION OF EXISTING UTILITIES AND SERVICES

E25.1 General

- (a) This specification covers the soft dig exploration of existing buried utilities within the McPhillips Water Main Renewal Project Site as specified on the Drawings.
- (b) Further to CW 1120, the Contractor shall perform exploratory excavations by soft dig methods or other methods suitable to the Contract Administrator to verify and locate buried utilities including but not limited to sewers, feeder mains, water mains, gas, power and telecommunications ducts and conduits, traffic signal conduits, street lighting and other communication cables.
- (c) **The soft dig exploration of existing buried utilities and services within the McPhillips Water Main Renewal site, as specified on the Drawings, shall commence immediately upon award of the project.**

E25.2 Execution

- (a) The information obtained will determine if an alternate vertical or horizontal alignment of the proposed water main may be beneficial to minimize conflicts with the existing utilities or services.
- (b) All proposed dig locations must be clearly identified and submitted to the Contract Administrator prior to utility exploration work beginning.
 - (i) The Contract Administrator may add additional locations.
- (c) The Contractor shall arrange for all required utility locations, safety watches and other required notifications.
- (d) The Contractor shall provide a minimum of two (2) Business Days' notice to the Contract Administrator prior to conducting utility exposures.
- (e) The Contractor shall arrange for any required traffic control to be set up in advance of the work and notify the Contract Administrator to arrange for lane closures as required.
- (f) The Contractor shall use a soft dig (hydro-excavator) to expose the utility under investigation.
- (g) The Contractor shall record the depth of the utility and provide this information to the Contract Administrator.
- (h) The Contractor is responsible for backfill and restoration of dig locations.

E25.3 Measurement and Payment

- (a) Exploration of existing utilities and services at the five (5) locations as specified on the Drawings shall be measured per each soft dig location at the unit rate identified as "Pre-Construction Exploration of Existing Utilities and Services" under McPhillips Street. The cost shall include all Works described herein for each utility exploration hole.
- (b) All other soft digging required for this project will be incidental to the Works of the project.

E26. FEEDERMAIN PROTECTION

- E26.1 The Work involves construction activity in close proximity to the active 500 mm diameter and 1050 mm diameter McPhillips feeder main.
- E26.2 The McPhillips feeder main is a critical component of the City of Winnipeg water supply system, and work in close proximity to the pipeline shall be undertaken with an abundance of caution, inadvertent damage to the pipe would likely result in catastrophic consequences.
- E26.3 Work around the feeder main shall be planned and implemented to minimize the time period that Work is carried out in close proximity to the pipe 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.
- E26.4 No separate measurement or payment will be made for feedermain protection, and will be considered incidental to the Works of the project.

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;
- F1.1.1 Each Individual shall be required to obtain a Police Information Check from the police service having jurisdiction at his/her place of residence. Or
- (a) BackCheck, forms to be completed can be found on the website at: <http://www.backcheck.net/> ; or
 - (b) Commissionaires (Manitoba Division), forms to be completed can be found on the website at: <https://www.commissionaires.ca/en/manitoba/home> .
- F1.2 Prior to the award of Contract, and during the term of the Contract if additional or replacement individuals are proposed to perform Work, the Contractor shall supply the Contract Administrator with a Police Information Check and a Public Safety Verification Check obtained not earlier than one (1) year prior to the Submission Deadline, or a certified true copy thereof, for each individual proposed to perform the Work.
- F1.3 Any individual for whom a Police Information Check and/or a Public Safety Verification Check is not provided, or for whom a Police Information Check indicates any convictions or pending charges related to property offences or crimes against another person will not be permitted to perform any Work.
- F1.4 Any Police Information Check and a Public Safety Verification Check obtained thereby will be deemed valid for the duration of the Contract subject to a repeated records search as hereinafter specified.
- F1.5 Notwithstanding the foregoing, at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require an updated Police Information Check and/or a Public Safety Verification Check. Any individual who fails to provide a satisfactory Police Information Check and/or Public Safety Verification Check as a result of a repeated Police Information Check will not be permitted to continue to perform any Work as specified in F1.1.