



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 1045-2013

**PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT
SERVICES FOR WASTEWATER SEWER RIVER CROSSING INSPECTIONS**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR WASTEWATER SEWER RIVER CROSSING INSPECTIONS

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, April 29, 2014.
- 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, a Site meeting will be held at the following locations and times on April 25, 2014 to provide Bidders access to the Site.
- (a) 9:00 A.M to 9:15 A.M.: Site 1 – St. James Interceptor Upstream Junction Chamber (Assiniboine Avenue west of Carroll Road) – No chamber entry available
 - (b) 9:45 A.M to 10:00 A.M.: Site 6a – Munro-Polson Siphon Upstream Chamber (526 Henderson Highway) – Chamber entry available
 - (c) 10:10 A.M to 10:25 A.M.: Site 3a – Newton Avenue Forcemain Upstream Valve Chambers (Larchdale Crescent and Kildonan Drive) – No chamber entry available
 - (d) 10:35 A.M to 10:50 A.M.: Site 2 – Northeast Interceptor Upstream Junction Chamber (west end of Whellams Lane) – No chamber entry available
 - (e) 11:00 A.M to 11:15 A.M.: Site 2 – Northeast Interceptor Downstream Junction Chamber (east end of John Black Avenue) – No chamber entry available
 - (f) 11:25 A.M to 11:40 A.M.: Site 6a – Munroe Polson Siphon Downstream Chamber (75 Scotia Street) – Chamber entry available
- B3.2 The Bidder shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.
- B3.3 Although attendance at the Site Investigations is not mandatory, the City strongly suggests that Proponents attend.
- B3.4 The Bidder is advised that the valve chambers are Confined Entry locations. Persons wishing to enter the chambers will be required to supply all necessary personal protective safety equipment, including body harness, hard hats, and safety boots, as well as personal lighting required to view the Site. The City of Winnipeg will provide a retrieval hoist, surface lighting, and gas detector. Personnel attending the Site shall be properly trained in Confined Space entry in accordance with Manitoba legislation and their individual company policy.

B4. ENQUIRIES

- B4.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.
- 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, only to the Bidder who requested approval of the substitute.
- B7.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- 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 B16.
- 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.
- B7.10 Notwithstanding B7.2 to B7.9, and in accordance with B8.6 deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B16.1(a).

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, to constitute a responsive Bid.
- 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 B16.1(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 12 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;

- (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

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. QUALIFICATION

B11.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.

B11.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

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

B11.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
- (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba);

B11.4 Further to B11.3(a) the Bidder and/or any proposed Subcontractor undertaking the cleaning of pipelines 600 mm and greater must be able to demonstrate the following qualifications in accordance with B11.7 (Form L: Contractor Experience):

- (a) A minimum of three successfully cleaned pipelines for each of the following:
 - (i) Non-pressurised sewer siphons.

- (ii) Pressurised sewer forcemains.
- (b) A minimum of three examples of successful pipeline pigging using polyurethane foam pigs.
- B11.5 Further to B11.3(a) the Bidder shall submit project experience of key project personnel for either the Contractor and/or any proposed Subcontractor undertaking the pipeline cleaning work in accordance with B11.7 (Form L: Contractor Experience):
- B11.6 Further to B11.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
 - (a) a 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
 - (b) 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
 - (c) 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/>).
- B11.7 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.
- B11.8 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B12. BID SECURITY

- B12.1 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.
- B12.1.1 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.
- B12.1.2 All signatures on bid securities shall be original.
- B12.1.3 The Bidder shall sign the Bid Bond.
- B12.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.

B12.2 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.

B12.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B12.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.

B12.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.

B12.3 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.

B13. OPENING OF BIDS AND RELEASE OF INFORMATION

B13.1 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.

B13.1.1 Bidders or their representatives may attend.

B13.2 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/default.stm>

B13.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/default.stm>

B13.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B14. IRREVOCABLE BID

B14.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.

B14.2 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.

B15. WITHDRAWAL OF BIDS

B15.1 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.

B15.1.1 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.

B15.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

- B15.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
 - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B15.1.3(b), declare the Bid withdrawn.

B15.2 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 B14.2 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.

B16. EVALUATION OF BIDS

- B16.1 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 B11 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B7.
- B16.2 Further to B16.1(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.
- B16.3 Further to B16.1(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.
- B16.4 Further to B16.1(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.
- B16.4.1 Further to B16.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B17. AWARD OF CONTRACT

- B17.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B17.2 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.
- B17.2.1 Without limiting the generality of B17.2, 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.

B17.3 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 B16.

B17.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm
- C0.2 A reference in the Bid Opportunity to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Construction*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract consists development of access to, and cleaning of wastewater pipelines crossing under rivers, and provision of inspection support services to specialized pipeline inspection firm.

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

- (a) Development of site access.
- (b) Cleaning of pipeline crossings under rivers using pipeline cleaning pigs, jet flushers and other equipment.
- (c) Insertion of rope tag lines in crossings for deployment of specialized "smart" inspection tools.
- (d) Winching of vendor supplied gauge pigs through pipelines to confirm diameters and obstructions.
- (e) Provision of confined entry support to specialized pipeline inspection contractors and engineering staff.
- (f) Completion of manhole and valve chamber modifications to allow access for inspections. This includes the removal and replacement of existing access covers, manhole rungs and ladders, and grated working platforms.
- (g) Construct chamber piping modifications as required to provide access to pipelines for cleaning and inspection.
- (h) Construct pipeline access points by installing tool launching wyes.
- (i) Installation of pipeline inspection tool launch barrels and cable guide systems/pulleys (launch barrels and cable guidance equipment to be provided by others).
- (j) Provision of other miscellaneous inspection support.
- (k) Site restoration

D2.3 Cleaning and inspection of the following river crossings are to be undertaken as part of this contract:

- (a) Site 1a and 1b - St. James Interceptor Siphon
 - (i) 600 mm diameter Steel Siphon
 - (ii) 500 mm diameter Steel Siphon
- (b) Site 2a and 2b - Northeast Interceptor Siphon
 - (i) 800 mm diameter Steel Siphon
 - (ii) 500 mm Steel diameter Siphon
- (c) Site 3a - Newton Avenue Forcemain
 - (i) 350 mm diameter Steel Forcemain
- (d) Site 4a and 4b - St. James Forcemain
 - (i) Twin 450 diameter mm Steel Forcemains
- (e) Site 6a - Munro-Polson Siphon
 - (i) 450 mm diameter Steel Siphon

- (f) Site 15 – Truro Creek Siphon
 - (i) 300 mm diameter Steel Siphon

D2.4 Pipeline inspections will be grouped into two inspection periods. Inspection mobilization dates provided below are subject to change based on weather, high water conditions, availability of the pipeline inspection crews, and system operations within the City of Winnipeg.

- (a) Inspection Mobilization 1
 - (i) Site 1a
 - (ii) Site 1b
 - (iii) Site 2a
 - (iv) Site 2b
- (b) Inspection Mobilization 2
 - (i) Site 3a
 - (ii) Site 4a
 - (iii) Site 4b
 - (iv) Site 6a
- (c) Optional Mobilization
 - (i) Site 15 – Site 15 is intended to be utilized as a standby site to be inspected in the event of delays at other sites. Contractor shall be prepared to access in either mobilization

D3. DEFINITIONS

D3.1 When used in this Bid Opportunity:

- (a) **"CSA"** means Canadian Standards Association;
- (b) **"ASTM"** means American Society for Testing and Materials;
- (c) **"AWWA"** means American Water Works Association;
- (d) **"Site 1a"** means St. James Interceptor Siphon (600 mm)
- (e) **"Site 1b"** means St. James Interceptor Siphon (500 mm)
- (f) **"Site 2a"** means Northeast Interceptor Siphon (800 mm)
- (g) **"Site 2b"** means Northeast Interceptor Siphon (500 mm)
- (h) **"Site 3a"** means Newton Avenue Forcemain
- (i) **"Site 4a and 4b"** means St. James Forcemain
- (j) **"Site 6a"** means Munro-Polson Siphon (450 mm)
- (k) **"Site 15"** means Truro Creek Siphon (300 mm)

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is AECOM Canada Ltd., represented by:

Marv McDonald, C.E.T.
Project Manager
99 Commerce Drive
Winnipeg, MB R3P 0Y7

Telephone No. 204-477-5381
Facsimile No. 204-284-2040

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

D4.3 Bids Submissions must be submitted to the address in B8.8.

D5. CONTRACTOR'S SUPERVISOR

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

D6. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

D6.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.

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

D6.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;

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

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

D7. NOTICES

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

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

D7.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:

The City of Winnipeg
Chief Financial Officer
Facsimile No.: 204 949-1174

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

The City of Winnipeg
Legal Services Department
Attn: Director of Legal Services
Facsimile No.: 204 947-9155

D8. FURNISHING OF DOCUMENTS

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

SUBMISSIONS

D9. AUTHORITY TO CARRY ON BUSINESS

D9.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D10. SAFE WORK PLAN

D10.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D10.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

D10.3 Notwithstanding B11.6 at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require an updated COR Certificate or Annual Letter of good Standing. A Contractor, who fails to provide a satisfactory COR Certificate or Annual Letter of good Standing, will not be permitted to continue to perform any Work.

D11. INSURANCE

D11.1 The Contractor shall provide and maintain the following insurance coverage:

- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability 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) Contractors Pollution Liability (CPL) insurance in the amount of at least one million dollars (\$1,000,000) per occurrence and one million dollars (\$1,000,000) aggregate insuring against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder performed by the Contractor, its agents, representatives, employees or subcontractors. Coverage to include:
 - (i) Bodily injury, sickness, disease, mental anguish or shock sustaining by any person, including death;
 - (ii) Property damage including physical injury to or destruction of tangible property and the resulting loss or use thereof; loss of use of tangible property that has not been physically injured or destroyed; diminution in value; and Natural Resource Damages;
 - (iii) Clean –up costs (including restoration/replacement costs);
 - (iv) Defense including costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such compensatory damages;
 - (v) Transported cargo and non-owned disposal sites (blanket basis)

Coverage shall apply to both sudden and gradual pollution conditions, including the further disruption of pre-existing conditions, arising from the services rendered by the Contractor or others on their behalf. Further, coverage shall apply to conditions on, at, under and emanating from the job site including the discharge, dispersal, release, or escape of smoke, vapours, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, structures thereupon, the atmosphere or any watercourse or body of water, which results in any loss or damages defined above. Coverage shall not contain any "Insured vs Insured" exclusion preventing the City from bringing a claim against the Contractor, nor any restrictions for property of others in the care, custody or control of the Contractor, CPL to remain in place during the performance of the Work and during the warranty period.

- D11.2 The Contractor is to ensure that all sub-contractors provide and maintain comparable insurances to that outlined in D11.1 (a) and (b) above. The Contractor is to ensure that any sub-contractors provide and maintain comparable insurances to that outlined in D11.1 (c) as deemed necessary by The Contractor. Insurances are to be maintained during the performance of the Work and throughout the warranty period.
- D11.3 Deductibles shall be borne by the Contractor.
- D11.4 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D11.5 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D12. PERFORMANCE SECURITY

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

D13. SUBCONTRACTOR LIST

- D13.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D14. EQUIPMENT LIST

D14.1 The Contractor shall provide the Contract Administrator with a complete list of the equipment which the Contractor proposes to utilize (Form K: Equipment 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 C4.1 for the return of the executed Contract.

D15. DETAILED WORK SCHEDULE

D15.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

(a) The Contractor shall note that schedule adjustments may be required in the event that the specialist inspection contractor schedule is altered.

D15.2 The detailed work schedule shall consist of the following:

(a) a Gantt chart for the Work.

all acceptable to the Contract Administrator.

D15.3 Pipeline inspections shall be scheduled on successive days in each mobilization. Each individual pipeline inspection is expected to take one day. Time permitting, more than one inspection may be completed in one day. Mobilization 1 pipelines shall commence with the 500 millimetre pipelines at Site 1 and Site 2, in either order. Upon completion of inspection of 500 millimetre pipelines, a 2 Calendar Day period is required by the specialist inspection contractor to convert tools to different pipe sizes. This conversion period may occur on a weekend

D15.4 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 based on the proposed inspection schedule in D2.4:

(a) For each site:

(i) Site Access and Piping Modifications

(ii) Pipeline Cleaning and Gauging

(iii) Inspection Support

(iv) Final Piping Modifications

(v) Site Restoration

SCHEDULE OF WORK

D16. COMMENCEMENT

D16.1 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.

D16.2 The Contractor shall not commence any Work on the Site until:

(a) the Contract Administrator has confirmed receipt and approval of:

(i) evidence of authority to carry on business specified in D9;

(ii) evidence of the workers compensation coverage specified in C6.15;

(iii) the Safe Work Plan specified in D10;

(iv) evidence of the insurance specified in D11;

(v) the performance security specified in D12;

(vi) the Subcontractor list specified in D13;

(vii) the equipment list specified in D14; and

(viii) the detailed work schedule specified in D15.

- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

D16.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.

D16.4 The City intends to Award this contract by May 30, 2014

D16.5 If the actual date of award is later than the intended date, the dates specified for Commencement, Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D17. CRITICAL STAGES

D17.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) Inspection Mobilization 1 pipelines shall be completed by date established in D17.3(a)

D17.2 Inspection Mobilization 2 pipelines shall be completed by date established in D17.3(b)

D17.3 Final Critical Stage dates will be established immediately upon receipt of letter of intent, on a mutually agreeable schedule between the Specialist Inspection Contractor, PICA Corp., the City of Winnipeg, and the Successful Contractor, based on availability of all parties, and procurement of materials. The Contract Administrator will schedule a meeting with all parties within three (3) Business Days of receipt of the Letter of Intent. Schedule dates shall be limited by the following dates;

- (a) Mobilization 1 pipelines are to be available for inspection no later than June 20, 2015
- (b) Mobilization 2 pipelines are to be available for inspection no later than August 22, 2015

D17.4 Once inspection dates for Mobilization 1 and Mobilization 2 are established, the Critical Dates identified in D17 will be established.

D18. SUBSTANTIAL PERFORMANCE

D18.1 The Contractor shall achieve Substantial Performance by September 30, 2014.

D18.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

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

D19. TOTAL PERFORMANCE

D19.1 The Contractor shall achieve Total Performance by October 17, 2014.

D19.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D19.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D20. LIQUIDATED DAMAGES

- D20.1 If the Contractor fails to achieve Critical Stages, 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) Critical Stages – five thousand dollars (\$5,000.00)
 - (b) Substantial Performance - one thousand dollars (\$1,000.00);
 - (c) Total Performance - five hundred dollars (\$500.00).
- D20.2 The amounts specified for liquidated damages in D20.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Critical Stages, Substantial Performance or Total Performance by the days fixed herein for same.
- D20.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

CONTROL OF WORK

D21. JOB MEETINGS

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

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

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

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

- D23.1 Further to B11.6, 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 B11.6.

MEASUREMENT AND PAYMENT

D24. PAYMENT

- D24.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D25. WARRANTY

- D25.1 Warranty is as stated in C13.

FORM H1: PERFORMANCE BOND
(See D12)

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

_____ dollars (\$_____)

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

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

BID OPPORTUNITY NO. 1045-2013

PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR
WASTEWATER SEWER RIVER CROSSING INSPECTIONS

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

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

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

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

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

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

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

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

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 1045-2013

PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES
FOR WASTEWATER SEWER RIVER CROSSING INSPECTIONS

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)

FORM K: EQUIPMENT
(See D14)

**PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR
WASTEWATER SEWER RIVER CROSSING INSPECTIONS**

<p>1. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>2. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>3. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>

FORM K: EQUIPMENT
(See D14)

**PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR
WASTEWATER SEWER RIVER CROSSING INSPECTIONS**

<p>4. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>5. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>6. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>

FORM L: CONTRACTOR EXPERIENCE
(See B11)

**PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR
WASTEWATER SEWER RIVER CROSSING INSPECTIONS**

Attach additional resumes and documents as required. Indicate whether Projects/Project Personnel are for Contractor or Subcontractor, and if applicable include name of Subcontractor.

1. Project References:

Project Client/Contact: _____
(Name)

(Address)

(phone) (email)

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

2. Project References:

Project Client/Contact: _____
(Name)

(Address)

(phone) (email)

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

FORM L: CONTRACTOR EXPERIENCE

(See B11)

**PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR
WASTEWATER SEWER RIVER CROSSING INSPECTIONS**

3. Project References:

Project Client/Contact: _____

(Name)

(Address)

(phone)

(email)

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

_____	_____	_____
_____	_____	_____
_____	_____	_____

4. Project References:

Project Client/Contact: _____

(Name)

(Address)

(phone)

(email)

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

_____	_____	_____
_____	_____	_____
_____	_____	_____

FORM L: CONTRACTOR EXPERIENCE

(See B11)

**PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR
WASTEWATER SEWER RIVER CROSSING INSPECTIONS**

5. Project References:

Project Client/Contact: _____

(Name)

(Address)

(phone)

(email)

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

_____	_____	_____
_____	_____	_____
_____	_____	_____

6. Project References:

Project Client/Contact: _____

(Name)

(Address)

(phone)

(email)

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

_____	_____	_____
_____	_____	_____
_____	_____	_____

FORM L: CONTRACTOR EXPERIENCE
(See B11)

**PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR
WASTEWATER SEWER RIVER CROSSING INSPECTIONS**

7. Project Personnel:

Name and Title: _____
(Name)

Qualifications: (attach resume and fill out information below)

<u>Year</u>	<u>Description of Past Project</u>	<u>For Whom Work Was Performed</u>	<u>Value</u>

8. Project Personnel:

Name and Title: _____
(Name)

Qualifications: (attach resume and fill out information below)

<u>Year</u>	<u>Description of Past Project</u>	<u>For Whom Work Was Performed</u>	<u>Value</u>

9. Project Personnel:

Name and Title: _____
(Name)

Qualifications: (attach resume and fill out information below)

<u>Year</u>	<u>Description of Past Project</u>	<u>For Whom Work Was Performed</u>	<u>Value</u>

FORM L: CONTRACTOR EXPERIENCE

(See B11)

**PROVISION OF PIPELINE ACCESS MODIFICATIONS, CLEANING AND SUPPORT SERVICES FOR
WASTEWATER SEWER RIVER CROSSING INSPECTIONS**

10. Project Personnel:

Name and Title: _____
(Name)

Qualifications: (attach resume and fill out information below)

<u>Year</u>	<u>Description of Past Project</u>	<u>For Whom Work Was Performed</u>	<u>Value</u>

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 Drawings are provided and applicable to the Work:

<u>Appendix No.</u>	<u>Title</u>
A	Site Drawings
B	Historic Record Drawings
C	Proposed Chamber Modifications and Work Plans
D	Site Photos
E	Sewer Siphon Sonar Data

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
D-13325	St. James Interceptor Forcemain (Site 4a and 4b)

GENERAL REQUIREMENTS

E2. RIVER CROSSING SITE ACCESS

- E2.1 General
- (a) The Contractor shall provide and develop access to manhole, chambers or pipeline access locations prior to undertaking preparation and cleaning work.
- E2.2 Submittals
- (a) The Contractor shall submit a site access plan for review by the Contract Administrator a minimum of five (5) working days prior to commencing Work on site.
- E2.3 Site Access Requirements:
- (a) Site 1a and 1b - St James Interceptor Siphon (Elmvale Crescent at McCallum to Assiniboine Avenue near Carroll Rd)
- (i) Access on both sides is grassed right-of-way.
 - (ii) Provide access to both chambers for preparation, cleaning, and inspection work.
- (b) Site 2a and 2b – Northeast Interceptor Siphon (West end of Whellams Lane to the south side of Chief Peguis Trail)
- (i) Access on east side is via a private access road.
 - (ii) Access on west side is via a multi-use pathway off Chief Peguis Trail.
 - (iii) Provide access to both chambers for preparation, cleaning, and inspection work.
- (c) Site 3a – Newton Forcemain (Newton Ave to multiuse path (Kildonan Drive) between Rossmere Crescent and Larchdale Crescent)

- (i) Access on east side is via multi-use pathway.
 - (ii) Access on west side is paved access.
 - (iii) Provide access to chambers on the east side and the manhole on the west side for preparation, cleaning, and inspection work.
- (d) Site 4a and 4b - St James Forcemain (Assiniboine Crescent (near Winderham Road) to Assiniboine Avenue (Ashcroft Point)
 - (i) Access on both sides is via residential streets.
 - (ii) Provide access to the upstream chamber for installation of wye fittings, cleaning and inspection work and the downstream manhole for cleaning and inspection.
- (e) Site 6a – Munroe-Polson Sewer Siphon (Polson Ave at Scotia St to Munroe at Henderson Hwy)
 - (i) Access to site is via a hard access road, on City right-of-way.
 - (ii) Access to pipeline is through existing pump and comminutor stations.
 - (iii) Provide access to both chambers for preparation, cleaning, and inspection work.
- (f) Site 15 – Truro Creek Siphon
 - (i) Access on the east side of the siphon is via a multi-use path off Douglas Park Road.
 - (ii) Access to the west side of the siphon is at the corner of Deer Lodge Pl and Albany Street.
 - (iii) Provide access to both manholes for bypass pumping (if required), cleaning, and inspection work.
- (g) Where site access utilizes multi-use pathways, the pathways must remain open to public use. Ensure adequate delineation, fencing, flagging or other measures to protect public.
- (h) Where tracked equipment is utilized, protect pathways from damage with planking. No payment will be made for damages caused by equipment tracks on unprotected surfaces.
- (i) Where site access utilizes grassed right-of-ways, limit access for heavy equipment to a single pathway directly from street to work area, Protect grassed areas with planking or other measures to minimize rutting and damage.
- (j) Laydown and storage areas shall be staged away from areas prone to damage.

E2.4 Methods of Measurement and Payment

- (a) Development of site access shall be considered incidental to “Pipeline and Chamber Modifications” and will not be measured for payment. No separate payment will be made.
- (b) Restoration of grassed and pavements, where approved by the Contract Administrator will be measured and paid in accordance to E9.

E3. EXCAVATION, SHORING, AND BACKFILL

E3.1 Description

- (a) This Specification covers the requirements for excavations and backfilling of trenches, pipelines, and structures.

E3.2 Submittals

- (a) Shop drawings for all excavation shoring (where required) shall be prepared and submitted in accordance with CW 1100 a minimum of five (5) working days prior to undertaking the excavation and shoring installation. Where required by Workplace Safety and Health Regulation, shoring shop drawings shall be sealed by a Professional Engineer, registered in the Province of Manitoba, experienced in the design of excavation shoring systems.

E3.3 Approvals

- (a) City of Winnipeg Waterways approvals have been submitted and will be in place prior to the start of construction.

E3.4 Shoring Design

- (a) Shoring shall be provided for excavations in accordance with CW 2030.
- (b) Excavation shoring shall be designed to accommodate the installation of all pipe and fittings.
- (c) Where long term shoring for excavations is required provide stamped shop drawings in accordance with E3.2.

E3.5 Excavation

- (a) Material from excavations shall not be stockpiled on the riverbank, or within 30 metres of the top of the riverbank.
- (b) Granular materials, pipe bedding, and other materials shall not be stockpiled on the riverbank, or within 30 metres of the top of the riverbank.
- (c) Materials shall not be stockpiled over pipelines.
- (d) Excess excavation from excavations shall be disposed of off-site.
- (e) Granular bedding in the vicinity of existing pipelines shall be dewatered and stabilized prior to undermining pipes to prevent loss of granular pipe foundation.
- (f) Carefully excavate to expose existing pipelines. Excavation within 1.0 m of the pipe shall be done using soft dig or hand excavation methods to prevent damage to the pipe.

E3.6 Backfill

- (a) Backfill within 1 m of existing and proposed pavements shall be completed to CW 2030, Class 2 standards.
- (b) Backfill under proposed paths and walkways shall be completed to CW 2030, Class 4 standards.
- (c) Backfill within 1 metre of existing concrete structures shall be completed with free draining pit run granular material to CW 2030, Class 2 standards. The top 600 millimetres of the backfill adjacent to concrete structures shall be insitu clay material completed to CW 2030, Class 4 standards.
- (d) All other areas shall be backfilled with a Class 5 backfill unless otherwise noted on the drawings.

E3.7 Measurement and Payment

- (a) Excavation, shoring, and backfilling for excavations shall be considered incidental to "Pipeline and Chamber Modifications" and will not be measured for payment. No separate payment will be made.

E4. CONFINED ENTRY SUPPORT

E4.1 Description

- (a) This specification covers provision of confined entry and access support for specialized inspection contractors and inspection personnel.

E4.2 Scope of Services

- (a) Specialist inspection contractors, consultants and City personnel require dedicated confined entry support services during pipeline inspection of pipeline river crossings. Each river crossing will require simultaneous access on each side of the river crossing for installation and retrieval of in-line inspection tools. For purpose of provision of services, allow for 2 entrants per side and additional support as required for standby and rescue.
 - (i) For waste water pipelines, services will include provision of air supply for self-contained breathing apparatus (SCBA), forced air ventilation fans and air quality monitors.

E4.3 Equipment

- (a) Safety Retrieval winch and tripod
 - (i) Provide sufficient retrieval winches to support inspection crews on each side of the crossing. A maximum of two entrants shall be assumed per side.
 - (ii) Provide two body harnesses per entry location, plus additional harnesses for backup and rescue.
- (b) Self-Contained Breathing Apparatus (SCBA) air supply
 - (i) Provide air supply and regulators to support two entrants per location, plus rescue backup.
 - (ii) Provide 5 minute backup bottles for each entrant.
 - (iii) Regulators compatible with Scott AV-3000 masks or masks shall be provided.
 - (iv) Entrants will provide their own masks if Scott Av-300 compatible system used.
 - (v) Support and rescue personnel and equipment shall be provided by Contractor.
- (c) Air Quality Monitors
 - (i) Provide a minimum of two multi-gas air quality monitors for each crossing access location. Each monitor shall provide continuous exposure monitoring for oxygen, carbon monoxide, hydrogen sulphide and combustible gases.

E4.4 Methods

- (a) Be fully responsible for confined entry access on site, in accordance to Manitoba Workplace Health and Safety Regulation 217/2006 and subsequent amendments.
- (b) Support services will be required to support one pipeline crossing (one inspection crew) at a time. Each crossing will require support on each side of the river.
- (c) Safety Personnel shall be dedicated to confined entry access when inspection personnel are in confirmed areas.
- (d) Maintain confined entry permit logs.

E4.5 Measurement and Payment

- (a) Confined entry support shall be considered incidental to "Pipeline Inspection Support Services" and will not be measured for payment. No additional payment will be made.

E5. CHAMBER AND PIPING MODIFCATIONS

E5.1 Description

- (a) This Specification shall cover the modification of manholes, valve chambers, watermains, sewer mains and forcemains as required for cleaning inspection the river crossing pipelines.

E5.2 Description of Work:

- E5.2.1 The following is an overview list of the proposed work at each site, work at each site will include but is not limited to the following. See the Construction Drawings and site specific drawings attached in Appendix C for a complete breakdown of the required chamber and piping work:
 - (a) Site 1 - St. James Interceptor Siphon
 - (i) South Chamber - Abandon existing 300 millimetre chamber drain, remove valve and install blind flange.
 - (ii) North Chamber - Install flow-through bypass plugs and piping as required
 - (b) Site 2 – Northeast Interceptor Siphon
 - (i) Both Chambers
 - ◆ Permanently remove all existing ladder cages. Touch up cut areas with zinc rich paint.

- ◆ Temporarily remove and replace grating as required for pipeline access.
- (ii) East Chamber – Install flow diversions as required
- (c) Site 3a - Newton Avenue Forcemain
 - (i) East Chambers:
 - ◆ Install a 300 mm gate valve between the existing chambers. Linden Pump Station Shutdown required. See E6.5.3. Close valve.
 - ◆ Replace existing reducer in north chamber. Replace existing knife gate valves, and fittings in north chamber identified on the drawings in Appendix C. Hawthorne Pump Station Shutdown Required.
 - ◆ Reconfigure chamber piping in south chamber to enable cleaning and inspection of the steel (south) forcemain crossing as shown on drawings attached in Appendix C. Linden Pump Station Shutdown required. See E6.5.3.
 - ◆ Open valve between chambers.
 - ◆ Complete cleaning and inspections.
 - ◆ Replace existing knife gate valves, and fittings in south chamber as shown on the drawings in Appendix C. Linden Pump Station shutdown required. See E6.5.3.
 - (ii) West Chamber:
 - ◆ Install minimum 3.5 metre high mesh netting in front of work space and workers at all times while personnel on site. Contractor shall note this is adjacent to an active golf facility.
 - ◆ Construct sandbag cofferdam. Remove existing HDPE forcemain drop pipe and direct flow downstream of cofferdam with a flexible discharge hose.
 - ◆ Remove the existing gate valve on the steel forcemain as shown on the drawings attached in Appendix C.
 - ◆ Install a new HDPE discharge pipe on HDPE forcemain after cleaning and inspection work completed. The existing HDPE forcemain discharge to be delivered to the City for testing.
- (d) Site 4a and 4b – St. James Forcemain
 - (i) Install permanent inspection wyes and construct downstream flow diversion to enable cleaning and inspection of forcemains as shown on the Construction Drawings.
- (e) Site 6a - Munro-Polson Siphon
 - (i) Construct temporary staging platform in upstream chamber.
 - (ii) Construct upstream and downstream flow diversions.
 - (iii) Remove internal components (gate and bonnet) from upstream and downstream gate valves to enable cleaning and inspection of river crossing pipe.
 - (iv) After pipe inspection has been completed, remove temporary staging platforms and flow diversions.
- (f) Site 15 – Truro Creek Siphon
 - (i) Control flows during cleaning and inspection.

E5.3 Shop Drawings

- (a) Submit shop drawings for all permanently installed fittings, valves, piping and couplings in accordance with CW1110.

E5.4 Products

E5.4.1 Fasteners

- (a) Bolts for chamber piping and direct bury flange connections shall be ASTM F594 or ASTM F836M, type 316 stainless steel.
- (b) Nuts for chamber piping and direct bury flange connections shall be ASTM F594 or ASTM F836M, type 316 stainless steel.
- (c) Bolts for all stainless steel valves, sleeve style couplings, and restraints shall be ASTM F593 or ASTM F738M, type 316 stainless steel.
- (d) Nuts for all stainless steel valves, sleeve style couplings, and restraints shall be ASTM F594 or ASTM F836M, type 316 stainless steel.
- (e) Anti-seize compound shall be used on all bolts.
- (f) For flanged connections, bolt size, type and diameter shall be in accordance to AWWA C207. Bolt length suitable for coupling AWWA C207 Class B flange.

E5.4.2 Flange Gaskets

- (a) 3mm, full-faced, SBR rubber gaskets or neoprene in accordance with AWWA C207.
- (b) Gaskets shall be one piece construction where possible.
- (c) Segmented gaskets shall be constructed of a minimum number of segments and joints shall be of dovetailed construction, or other jointing methods approved by the Contract Administrator.

E5.4.3 Blind and Companion Flanges

- (a) Steel blind and companion flanges shall be AWWA C207, Class B.
- (b) Cast and ductile blind and companion flanges shall be ASME/ANSI B16.1 Class 125.
- (c) Steel blind and companion flanges to be fusion bonded epoxy coated to AWWA C213.
- (d) Cast and ductile blind and companion flanges shall be fusion bonded epoxy coated to AWWA C116.

E5.4.4 Ductile Iron Fittings

- (a) Flanged ductile iron fittings conforming to AWWA C110.
- (b) Permanently Installed Fittings
 - (i) Fittings shall be new.
 - (ii) Fittings to be cement-mortar lined in accordance with AWWA C104.
 - (iii) Fittings to be fusion bonded epoxy coated to AWWA C116.
- (c) Temporary Fittings
 - (i) Used fittings may be used for temporary connections and bypasses on sewage forcemains.
 - (ii) No requirements for coatings and linings on temporary fittings.

E5.4.5 Ductile Iron Pipe

- (a) Ductile iron pipe conforming to AWWA C151.
- (b) Permanently Installed Pipe
 - (i) Class 54 minimum pressure rating.
 - (ii) Pipe shall be new.
 - (iii) Pipe to be cement-mortar lined in accordance with AWWA C104.
 - (iv) Pipe to be liquid epoxy coated in accordance with AWWA C210 and E5.4.13. Surface preparation shall be completed in accordance with NAPF 500-03.

- (c) Temporary Pipe
 - (i) Used pipe may be used for temporary connections and bypasses on sewage forcemains.
 - (ii) No requirements for coatings and linings on temporary pipe.

E5.4.6 PVC Pipe and Fittings

- (a) PVC pipe and fittings shall conform to AWWA C900 or C905 and CSA B137.3.
- (b) Permanently Installed Pipe and Fittings:
 - (i) Shall have a dimension ratio (DR) of 18.
 - (ii) Shall be new.
- (c) Temporary Pipe used for Launching Cleaning and Inspection Tools
 - (i) May be in used condition.

E5.4.7 Fabricated Steel Pipe and Fittings

- (a) Steel pipe, patches, and fittings shall conform to AWWA C200 and meet the following requirements:
 - (i) Minimum steel yield strength of 207 MPa (30,000 psi)
 - (ii) Minimum wall thickness of 9.51 mm for all sizes.
 - (iii) All exposed steel surfaces shall be coated in accordance with AWWA C210, E5.4.13, and E5.5.4.
- (b) Welded steel patches on existing pipelines shall be externally coated with a petrolatum tape wrap system in accordance with E5.4.18 and E5.5.8.

E5.4.8 Flanges for Pipe and Fittings

- (a) Steel flanges shall conform to AWWA C207, minimum Class B Flange
- (b) Threaded ductile iron flanges shall conform to AWWA C115.

E5.4.9 Grooved Joints and Couplings

- (a) Direct grooved ends for ductile iron pipe shall conform to AWWA C606.
- (b) Grooved flange adaptors shall be compatible with AWWA C606 grooved end joints. Confirm compatibility to existing piping and fittings.
- (c) Grooved couplings and adaptors shall be constructed from ductile iron conforming to ASTM A536, grade 65-45-12.

E5.4.10 Pipe Couplings

- (a) Pipe couplings shall conform to AWWA C219.
- (b) Center sleeves and end rings for pipe couplings shall be constructed from:
 - (i) Ductile iron - for sizes less than 450 mm
 - (ii) Steel - for sizes 450 mm and greater
- (c) Minimum requirements are:
 - (i) Minimum sleeve length 250 mm
 - (ii) Minimum centre sleeve thickness for steel couplings - 6 mm
 - (iii) Couplings capable of accommodating up to 2 degrees deflection
 - (iv) Design pressure 150 psi
- (d) Restraining end rings shall be supplied where axial thrust restraint is specified on the Drawings. Restraint rings shall be specifically designed for the material type of the pipes being joined.
- (e) All hardware shall be type 316 stainless steel in accordance with E5.4.1.
- (f) Couplings to be fusion bonded epoxy coated in accordance with AWWA C213 for steel couplings and AWWA C116 for ductile iron couplings.

- (g) Couplings to be supplied with two di-electric insulating boots.
- (h) Buried pipe couplings shall be further protected against corrosion by wrapping the assembled coupler with petrolatum tape coating system in accordance with E5.4.18 and E5.5.8.

E5.4.11 Gate Valves

- (a) Gate valves shall conform to CW2110.

E5.4.12 Stainless Steel Knife Gate Valves

- (a) Provide two (2) 350 mm (nominal) Stainless Steel Knife Gate valves, complete with stainless steel bolts and two (2) face gaskets per valve.
- (b) Stainless steel knife gate valves conforming to AWWA C520.
- (c) Laying lengths shall conform to AWWA C520.
 - (i) 350 mm nominal laying length = 76 millimetres (3").
- (d) Valve body, gate, and all support structures shall be constructed from stainless steel
- (e) Stainless steel shall conform to ASTM A351, type 316 or ASTM A240, type 316.
- (f) All hardware to be type 316 stainless steel.
- (g) Provide enclosed stem guard to protect shaft from debris accumulation in open position.

The valve stem shall be a non-rising configuration fitting with a 50 mm AWWA operating nut, on top of shaft for connection of extension shaft.
- (h) Approved product: Dezurik KGC, Fabri-Valve C37S or approved equal in accordance to B7
- (i) Provide installation instructions
- (j) Provide Operation and Maintenance Manual

Provide manufacturer representative to attend valve commissioning. Allow 4 hours for on-site commissioning services.

E5.4.13 Coatings

- (a) Unless otherwise specified herein coatings for all chamber piping and fittings shall be a liquid epoxy meeting the requirements of AWWA C210.
- (b) Linings and coatings shall consist of a minimum of two (2) layers (dry film thickness of 5 mils each coat) with a final coating dry film thickness of 16 mils.
- (c) Submit Product Data for epoxy coatings in accordance with CW1110.

E5.4.14 Removable Slab Joint Filler

- (a) Joint filler for concrete slab shall be self-leveling, polyurethane sealant to meet requirements of ASTM C920, Type S, Grade P, Class 25, Use T, M, A, O, and I.
- (b) Approved product: Vulkem 45 as manufactured by Tremco, Sikaflex 1C SL, or approved equal in accordance with B7.

E5.4.15 Flange Isolation Kits

- (a) Flange isolation kits shall be used where noted, where dissimilar metal piping or fittings are joined.
- (b) Flange isolation kits shall be to City of Winnipeg specification except as modified below.
- (c) Each kit shall be double flange isolation kit with insulating sleeves and washers for each flange of the bolted connection.
- (d) Bolt sleeves shall be comprised of G10 or G11 epoxy glass.

- E5.4.16 Continuity Bonding
- (a) Wires for continuity bonding shall be No.10 American Wire Gauge (AWG) 7-strand copper conductor with black TWU insulation.
- E5.4.17 Galvanic Anodes
- (a) Galvanic anodes for cathodic protection of buried ferrous pipes and fittings shall be 10.9 kg pre-packaged zinc anodes to City of Winnipeg specification.
- E5.4.18 Petrolatum Tape Corrosion Protection System
- (a) All buried pipe couplers and flanged connections shall be protected against corrosion by a petrolatum tape corrosion protection system consisting of the following components:
 - (i) Petrolatum paste primer
 - (ii) Void-filling mastic filler
 - (iii) Petrolatum tape
 - (iv) Protective outerwrap
 - (b) Petrolatum tape systems shall conform to AWWA C217.
 - (c) Approved product: Petrolatum tape system manufactured by Denso North America Inc., Trenton Corporation, Petro Coating Systems Ltd, or approved equal in accordance with B7.
- E5.5 Methods
- E5.5.1 Hatches and Removable Slabs
- (a) Remove access hatches, covers and removable slabs where indicated on the drawings and as required for cleaning and inspection services. Replace all fasteners and bolts unless otherwise directed by the Contract Administrator.
 - (b) Replace all hatches and roof panels once cleaning and inspection work is complete.
 - (c) Re caulk joints using self leveling joint filler as per the manufactures recommendations complete with a foam backer rod.
- E5.5.2 Construction of Work Platforms
- (a) Work platforms shall be constructed where shown on the Drawings and inspection plans. Construct platforms as required to complete the cleaning and inspection work.
 - (b) Ensure all temporary work platforms conform to applicable health and safety guidelines.
- E5.5.3 Installation of Lead Wires, Continuity Bonding and Galvanic Anodes
- (a) Anodes and continuity bonding shall be installed on new and existing pipes and fittings where shown on the drawings or as directed by the Contract Administrator.
- E5.5.4 Coatings
- (a) Where indicated on the Drawings and directed by the Contract Administrator, prepare metal surfaces for recoating using the following methods:
 - (i) Steel - Prepare steel surfaces for recoating by blast cleaning to near-white metal as specified by Joint Surface Preparation Standard NACE No.2/SSPC-SP10.
 - (ii) Cast and Ductile Iron - Prepare ductile iron surface in accordance with NAF 500-03.
 - (iii) Remove all dust and loose residues from the prepared surfaces and chamber floor. The surface shall be roughened to a degree suitable for the coating system employed.
 - (b) Protect valve seals, machined surfaces, threads, and nameplates from sandblasting.
 - (c) Primer coat to follow immediately after completion of sandblasting and prep.

- (d) Paint prepared surfaces in accordance to AWWA C210, E5.4.13, and the manufactures recommendations.
- (e) Provide adequate ventilation and heat to facilitate curing of coatings.
- (f) Linings for pipes and fittings shall be applied and cured as recommended by the manufacturer prior to placing into service. Where accelerated cure times are required for assembly and water immersion, a coating and curing plan shall be submitted to the Contract Administrator in accordance with CW1110.

E5.5.5 Installation of Gate Valves (Site 3a)

- (a) Carefully excavate to expose existing pipelines in accordance with E3.5.
- (b) Confirm diameters of pipelines at tie in points and ensure appropriate couplers are available for reconnection of work
- (c) Do not sever existing pipeline until all materials to complete installation are on site and available for installation

E5.5.6 Field welding of Steel Pipelines and Fittings

- (a) Field welding of steel pipes shall conform to AWWA C206.
- (b) Connections to existing pipelines may be accomplished with a butt welded connection or a fillet welded split sleeve (external).
- (c) Patches on steel pipelines shall be fillet welded.

E5.5.7 Installation of Stainless Steel Knife Gate Valve

- (a) The stainless steel knife gate valve shall be installed as per provided manufacture installation instructions.
- (b) Install a stone disk on the stainless steel extension shaft.

E5.5.8 Installation of Petrolatum Tape Corrosion Protection Systems

- (a) Install in accordance with AWWA C217 and the manufactures recommendations.
- (b) For all surfaces to be wrapped with the corrosion protection system, remove loose rust, paint and foreign matter by hand and/or power tool cleaning in accordance with SSPC-SP-2 or SSPC-SP-3.
- (c) Apply a thin uniform coat of petrolatum paste primer, using a glove or brush, to all surfaces to be wrapped with the corrosion protection system.
- (d) Apply void-filling mastic filler, by hand, to all flanges designated to be wrapped with the corrosion protection system. Mold the mastic to a rounded configuration around the flange, filling all spaces around fasteners and eliminating sharp edges and irregular shapes.
- (e) Spirally wrap the petrolatum tape, using a minimum 25mm overlap, over the primed and mastic-filled pipe and flange surfaces. While wrapping, press out all air pockets and smooth all lap seams.
- (f) Spirally wrap clear outer wrap, using sufficient tension to make a tight-fitting cover, over the petrolatum tape.

E5.5.9 Bedding

- (a) All pipes shall be installed in accordance with CW2030, utilizing a Class B bedding.

E5.6 Measurement and Payment

E5.6.1 Piping and Chamber Modifications

- (a) "Piping and Chamber Modifications" shall be measured and paid on a Lump Sum basis for each of the river crossing sites listed in the Form B: Prices.
- (b) Payment for "Piping and Chamber Modifications" shall include the supply of all materials and performance of all chamber and pipe access modifications required for

cleaning and inspection of the pipelines. This shall include removal and trimming of trees, temporary grading, removal and replacement of access hatches and removable slabs, replacement of fasteners, heating and hording, construction of temporary platforms, installation of bypass plugs and piping, construction and installation of flow diversions, temporary piping modifications, installation of permanent inspection Wyes, spools, and couplings, installation of anodes, temporary excavations and shoring, backfilling, and any other work required to gain access to the pipeline as specified herein.

- (c) Payment for "Piping and Chamber Modifications" shall include the following:
 - (i) Fabrication of inspection tool launching guides as shown on the Drawings,
 - (ii) The installation of all new valves, and fittings.
 - (iii) The supply and installation of required steel and ductile iron spool pieces
 - (iv) The supply and installation of required PVC pipe
 - (v) The supply and installation of temporary piping and fittings required for cleaning and inspecting the pipelines
 - (vi) The supply and installation of all gaskets, fasteners, flange adaptors, and couplings required to complete the Work,
 - (vii) Installation of tag lines for cleaning and inspection purposes.
- (d) Payment for "Piping and Chamber Modifications" shall not include supply or installation of inflatable plugs and bypass piping.

E5.6.2 Supply of Fittings and Valves

- (a) "Supply of Fittings and Valves" measured and paid on a unit basis for each type of fitting or valve acceptable supplied as listed in Form B: Prices.

E5.6.3 Provisional Sewer Siphon Valve Removal

- (a) Removal of valves from sewer siphon chambers shall be paid on a unit basis for each valve acceptable removed.

E6. TEMPORARY FLOW DIVERSIONS

E6.1 Description

- (a) This Specification shall cover the supply and installation of flow diversions, bypass pumping, and pipeline shutdowns for the purposes of cleaning and inspecting of pipelines.

E6.2 Submittals

- (a) Submit a flow diversion plan for each site in accordance with CW1110. The flow diversion plan shall include the following:
 - (i) A sketch and description detailing the proposed arrangement of the flow diversion or bypass pumping
 - (ii) A list of the key components required for the flow diversion, including but not limited to the following:
 - (i) Inflatable plugs
 - (ii) Diversion materials
 - (iii) Step by step procedure for installation and removal of the diversion
 - (iv) Means and methods for dealing with excessive flows or wet weather events

E6.3 Products

E6.3.1 Temporary Inflatable Plugs

- (a) Plugs shall be capable of withstanding a minimum of 69 kPa (10 psi) of backpressure.
- (b) Plugs shall be capable of being anchored from upstream.
- (c) Inflatable plugs (if required) shall be provided by the Contractor.

E6.3.2 Flow Through Plugs

- (a) Flow-through plugs for the St. James Interceptor Siphon (Site 1a) must have the following flow-through capacity:
 - (i) 900 mm plug – 375 mm flow-through capacity.
 - (ii) 600 mm plug – 375 mm flow-through capacity.
- (b) Plugs shall be capable of withstanding a minimum of 69 kPa (10 psi) of backpressure.
- (c) Plugs shall be capable of being anchored from upstream
- (d) Flow Through plugs shall be new and turned over to the City upon completion of the Work
- (e) Submit shop drawings for flow through plugs in accordance with CW1110.
- (f) Approved product: Lansas Multi size super-flow plug or approved equal in accordance with B7.

E6.3.3 Bypass Hose and Fittings

- (a) Bypass hose shall be a semi rigid style slip on discharge hose.
- (b) Fabricated tee's and wyes shall be used were required.
- (c) Hose and fittings must be designed to withstand pressures no less than the allowable back pressure on the plugs.

E6.3.4 Sandbags

- (a) Where required, provide sandbags for diversion of flow. Remove and dispose of sandbags upon completion of inspection. Sandbags in contact with sewage shall be disposed of at an approved disposal facility.

E6.3.5 Stop Logs and Plywood Diversion Dykes

- (a) Stop logs and plywood diversion dykes may be used to direct wastewater flows where chamber configurations permit. Plywood to have a minimum thickness of 19 mm and to be braced as required to resist hydrostatic pressures.

E6.4 General Scheduling

E6.4.1 Flow Diversion Scheduling

- (a) Schedule and timing of flow diversions, temporary blockages and pumping station shutdowns are impacted by a number of factors such as system operation, maintenance activities, rainfall, and daily usage peaks. The City will endeavor to provide the requested schedule times and dates, but reserves the right to delay, postpone or re-schedule system operation events.
- (b) Assist in monitoring upstream flow levels.
- (c) The Contractor shall provide a minimum of five (5) Working Days notice to the Contract Administrator, in writing, prior to installing flow diversions and bypasses.
- (d) Be prepared to remove flow diversions immediately due to flow backups, wet weather flows or as requested by the Contract Administrator.

E6.5 Site Specific Requirements and Restrictions

E6.5.1 Site 1a and 1b - St. James Interceptor Siphon

- (a) Cleaning and gauging work may be undertaken in live flow.
- (b) Complete cleaning of the 500 mm siphon (Site 1b) prior to undertaking any activities which may restrict flow in the 600 mm siphon (Site 1a).
- (c) Install flow through bypass plugs as shown on the Drawings in Appendix C. Flow through bypass plugs may be left in place during peak day time flows. Flow diversions shall not be left in place without full time water level monitoring.
- (d) Bypass flow diversion may only occur during dry weather flows.

- (e) Installation of flow-through plugs may only occur during off peak periods, weekdays between 10:00 PM and 6:00 AM.
- (f) Where activities do not require flow bypass, one of the 2 pipelines can be blocked or restricted by tools or equipment for extended duration during dry weather flow.
- (g) The Contractor shall provide personal for fulltime monitoring of upstream manholes during bypass plug installation and operation.

E6.5.2 Site 2a and 2b – Northeast Interceptor Siphon

- (a) Cleaning and gauging work may be undertaken in live flow.
- (b) Complete cleaning activated on the 500 mm siphon (Site 2b) prior to undertaking any activities which may restrict flow in the 800 mm siphon (Site 2a).
- (c) Install flow diversions as shown on the Drawings in Appendix C. Flow diversions may be left in place during peak day time flows. Flow diversions shall not be left in place without full time water level monitoring.
- (d) Bypass flow diversion may only occur during dry weather flows.
- (e) Where activities do not require flow bypass, one of the 2 pipelines can be blocked or restricted by tools or equipment for extended duration during dry weather flow.

E6.5.3 Site 3a - Newton Avenue Forcemain

- (a) Install temporary piping as shown on the Drawings in Appendix C. Temporary piping may remain in place for the duration of the work.
- (b) Construct flow diversion in downstream manhole as shown on the Drawings in Appendix C.
- (c) Maximum of three (3) lift station shutdowns for reconfiguration of chamber piping in the east chambers prior and one (1) post cleaning and inspection.
- (d) Shutdown of Linden and Hawthorne pump stations may occur during peak dry weather flows.
 - (i) The Contractor shall supply 2 septage hauling trucks of 13,000 L capacity to accommodate inflows at the Linden Lift Station during the full duration of the lift station shutdown.
 - (ii) Wastewater shall be hauled to a location outside the Linden and Hawthorne catchment, designated by the City.
- (e) Maximum 12 hr pump station shut down.

E6.5.4 Site 4a and 4b - St. James Forcemain

- (a) Only one side of the forcemain crossing may be removed from operation at a time. The side removed from service may remain out of service for the duration of the work.
- (b) Coordinate with the Contract Administrator and the City for operation of the isolation valves within diversion chamber during pipeline construction, cleaning, or inspection. Provide written notice to the Contract Administrator a minimum of two (2) working days prior to the required valve operation.
- (c) Construct plywood/sandbag dyke diversions in downstream chamber to prevent backflow of wastewater into the out of service forcemain.

E6.5.5 Site 6a - Munro-Polson Siphon

- (a) Cleaning and gauging work may be completed in live flow.
- (b) Install plywood/sandbag flow diversions as shown on the Drawings in Appendix C in both upstream and downstream chambers.
- (c) Flow diversions may be left in place during peak day time flows. Flow diversions shall not be left in place without full time water level monitoring.
- (d) Bypass flow diversion may only occur during dry weather flows.

- (e) Where activities do not require flow bypass, one of the 2 pipelines can be blocked or restricted by tools or equipment for extended duration during dry weather flow.

E6.5.6 Site 15 – Truro Creek Siphon

- (a) Cleaning and inspection may be undertaken with live flows but shall only occur during dry weather flows.

E6.6 Methods

E6.6.1 Installation of Inflatable Plugs and Piping

- (a) Install flow through plugs as per manufactures recommendations
- (b) Plugs to be anchored to upstream manhole or chamber
- (c) Provide air supply and monitor plug inflation pressure, in accordance with manufacturer's recommendations.
- (d) Support piping and fittings as required to prevent significant deflection when full of water
- (e) Submit an inflatable plug installation plan for each plug installation a minimum of 5 working days prior to the planned installation.

E6.7 Measurement and Payment

E6.7.1 The "Supply of Inflatable Bypass Plugs" shall be measured and paid on a unit basis for each type of plug acceptable supplied as listed in Form B: Prices.

E6.7.2 Supply of anchors, cables, piping, fittings, and any other materials required to successfully install the bypass work shall be considered incidental to "Piping and Chamber Modifications" and will not be measured for payment. No additional payment will be made.

E6.7.3 Installation of flow diversions shall be considered incidental to "Piping and Chamber Modifications" and will not be measured for payment. No additional payment will be made.

E7. PIPELINE CLEANING

E7.1 Description

- (a) This Specification shall cover the cleaning of the pipelines to be inspected.

E7.2 Submittals

- (a) The Contractor shall submit in writing a detailed cleaning plan for each pipeline crossing for review by the Contract Administrator. The cleaning plan at a minimum shall include the following:
 - (i) Method(s) of cleaning
 - (ii) Sizes and densities of foam pigs to be used
 - (iii) Means of debris collection and disposal
- (b) The pipeline cleaning plan must be submitted a minimum of five (5) working days prior to undertaking cleaning operations.
- (c) No cleaning operations shall be undertaken prior to review of the cleaning plan by the Contract Administrator.

E7.3 Products

E7.3.1 Winch Line

- (a) Winch lines for cleaning shall not cause damage to pipelines or pipeline coatings. Provide synthetic winch line such as Amsteel, cable coated with sacrificial synthetic coating or braided flusher hose.
- (b) Tether line shall be a minimum of 9 mm synthetic rope.

- E7.3.2 Foam Pigs
- (a) Material: One piece moulded open-cell polyurethane
 - (b) Density: up to Medium (80 to 112 kg/m³)
 - (c) Pigs shall be supplied complete with a factory installed pulling rope or cable,
 - (d) For towed pigs, pigs shall be supplied complete with support disc on both ends suitable for towing pigs. Foam cores for pigs shall be of equal or greater density than foam body
 - (e) Pigs to be sized 2% larger than the internal diameter of the pipeline, or as recommended by the manufacture and approved by the Contract Administrator.

E7.3.3 Gauge Pigs will be supplied by the pipeline inspection contractor.

E7.3.4 Water for pig launching may be obtained from fire hydrants in accordance with CW 1120.

E7.4 Equipment

- (a) Sewage Debris, Pumping and Disposal
 - (i) Equipment as per CW 2140-R3, except storage tank volume shall be a minimum of 13,000 litres.
 - (ii) Where requested by Contract Administrator, such as in the case of a blockage, store liquid and decant at an approved offsite location.
- (b) Sewer Flushing Equipment
 - (i) Equipment as per CW 2140-R3

E7.5 Internal pipeline diameters based on record information. The Contractor is responsible to confirm the inner pipe diameters prior to undertaking cleaning work.

Site	Nominal Diameter (mm)	Estimated Internal Diameter (mm)
Site 1a	600	591
Site 1b	500	495
Site 2a	800	813
Site 2b	500	508
Site 3a	350	346
Site 4a and 4b	450	447
Site 6a	450	438
Site 15	300	292

E7.6 Methods

- E7.6.1 Pipeline Cleaning or Pigging
- (a) Where applicable, provide pig launch tubes, pipe and fittings, including valves.
 - (b) Where winch lines are utilized, they may be inserted by high pressure flusher nozzle, flow drone or other approved method.
 - (c) Untethered pigs utilizing differential pressure will be permitted upon approval of the Contract Administrator.
 - (d) Where high pressure flushing equipment is utilized, use construction methods specified in CW2140. Solid Debris cutting using methods in CW2140 Clause 3.3 will not be permitted.
 - (e) Cleaning using flushing equipment or foam pigs shall occur in the direction of the normal flow within the pipe.
 - (f) Cleaning is to be completed sufficient to accommodate in-line inspection tools, typically 25 millimetres smaller than pipe inside diameter.
 - (g) A minimum of one full sized low density foam pig shall be deployed per pipe.

- (h) Cleaning pigs shall not introduce air into pipeline river crossings below river levels. Many pipelines are weighted bottom installations, or shallow cover, and susceptible to floatation. Pipelines shall be kept full behind pigs
- (i) A gauge pig shall be pulled through the pipe to determine the effectiveness of the cleaning operation. Gauge pig shall be tethered on each end and be capable of being winched in either direction.
- (j) Cleaning operations shall continue until the Contract Administrator is satisfied that the pipe is passable by the inspection tools.
- (k) Upon completion of cleaning, a tag line shall be left in the pipeline and securely fastened, for future use by pipeline inspection contractor.
- (l) The Contractor shall note that some pipelines have evidence of significant debris accumulation. Where available, SONAR inspection data has been provided in Appendix E.
- (m) It is anticipated that pipeline cleaning will take a maximum of one day per pipeline. More than one pipeline can be cleaned per day, time permitting. Overtime rate shall be approved by the Contract Administrator.

E7.6.2 Chamber Cleaning

- (a) Clean excessive debris from all below ground portions of chambers prior to undertaking inspection work. Areas to be cleaned shall be identified by the Contract Administrator prior to undertaking cleaning operations.
- (b) A pressure washer capable of supplying 20,685 kPa of pressure for cleaning shall be used. Care should be taken to clean but not damage existing chamber components.
- (c) Collect and dispose of solid debris off site as per CW 2140.

E7.6.3 Disposal of Solid Debris

- (a) Where hydrovactoring of sewage and cleaning debris is required, the sewage may be decanted into nearby WWS MH's as approved by the Contract Administrator.
- (b) Solid debris shall be hauled off site as per CW 2140.

E7.6.4 Provisional Flushing and Hydrovac Services

- (a) Where requested by Contract Administrator, provide provisional flushing and hydrovac services to assist in inspection operations. This work is outside of the normal cleaning operations identified in E7.6.1.
- (b) Flushing equipment
 - (i) Flushing equipment shall conform to CW2140 and may be utilized for removal of debris from pipelines.
 - (ii) Nozzle pressures when utilizing flushing equipment within pipelines shall be limited to 10,350 kPa.
- (c) Hydrovac equipment as per CW 2140-R3, except storage tank volume shall be a minimum of 13,000 litres.

E7.7 Method of Measurement and Basis of Payment

E7.7.1 Pipeline Cleaning

- (a) "Pipeline Cleaning" shall be measured on a daily basis with an hourly overtime rate. Daily rate shall include up to 10 working hours, not including lunch breaks.
- (b) Payment for "Pipeline Cleaning" shall include supplying of all materials and performance of all work as specified herein, including site access, removal of access hatches, confined entry support, temporary access, flow diversions, performance of all cleaning and gauging work, and disposal of solid debris.

- (c) Time measured shall be based on on-site availability of crews, from the time crews are present on site, until crews are complete and site secured of the shift, as certified by the Contract Administrator.
- (d) Hourly overtime rate for each hour or portion thereof in excess of the daily minimum rate of 10 hours.
- (e) Payment for "Pipeline Cleaning" shall include the use of sewer flushing and hydrovac equipment where used as part cleaning program.
- (f) The supply of pigs for pipeline cleaning shall be considered incidental to "Pipeline Cleaning" and will not be measured for payment. No additional payment will be made.
- (g) Chamber cleaning will be considered incidental to "Pipeline Cleaning".

E7.7.2 Provisional Hydrovac Services

- (a) Provisional use of a hydrovac truck shall be measured on an hourly basis for each hour of use on site and paid for at the unit price for "Hydrovac Truck". Hauling and disposal of solid debris will not be measured for payment.
- (b) Payment for the use of a "Hydrovac Truck" shall include the supply of all materials and disposal of all debris.

E7.7.3 Provisional Sewer Flushing

- (a) Provisional use of sewer flushing equipment shall be measured on an hourly basis for each hour of use on site and paid for at the unit price for "Sewer Flushing Unit".
- (b) Payment for "Sewer Flushing Unit" shall include the supply of all materials and equipment required.

E8. INSPECTION SUPPORT SERVICES

E8.1 Description

- (a) This Specification shall cover the provision of support services for the inspection of pipelines.

E8.2 Support Services Requirements

E8.2.1 General

- (a) Pipeline inspections typically will require one day of onsite support per pipeline. It is intended that onsite support services will run on consecutive days. More than one site may be commenced on any day. No more than one inspection will occur at a time.
- (b) Provide support labour to assist inspection crews with handling of equipment, setup, and access.
- (c) Provide minimum of two support persons, including small hand and power tools to assist inspection crew, including:
 - (i) Portable hammer drills for setting anchor bolts in concrete (minimum 12 mm drive chuck)
 - (ii) Shovels
 - (iii) Hand tools
 - (iv) Light duty transportation truck(s)
 - (v) Portable ladders (two per crossing)
 - (vi) Gas powered air compressor with 5 gallon tank (minimum) and capable of supplying 8 cfm at 90 psi.
- (d) Support personnel shall assist inspection crews with access, removal of gratings, covers, installation of concrete anchors, where required, installation of flow diversion equipment, and any other general assistance to crews for completion of inspections.
- (e) Personnel for site support shall not be same personnel as Confined Entry Support personnel while inspections and confined access is under way.

- (f) The Contractor shall provide a heated space at each site for storage and setup of the inspection tools. The space shall be a minimum of 5 x 2.5 m.
- (g) Lifting Equipment
 - (i) Provide mobile lifting equipment, boom truck, loader or other equipment capable of lifting, moving and lowering inspection equipment into pipelines and chambers , in accordance to the following:

Pipeline Size	Inspection Tool Mass (kg)	Maximum Depth (m)
300	145	4.5
350	136	6.75
450	172	7.75
500	204	7.25 (Site 1b) 12 (Site 2b)
600	395	7.25
800	363	12

E8.2.2 Site Access and Restoration

- (a) Minimize disruption of public right-of-ways. Do not encroach on private property.
- (b) Where access is required for heavy equipment and vehicles, limit access to a single pathway directly from the street to the work area. Plank pathways and grassed areas to minimize damages due to rutting.
- (c) Remove all waste and debris upon completion of inspection. Clean up any spilled waste water and debris. Where directed, sprinkle sodium hypochlorite powder on spills.

E8.2.3 Chamber and Manhole Access

- (a) Remove hatches, covers, and removable concrete slabs as required for cleaning and inspection work.

E8.2.4 Lighting

- (a) Where required for night work, provide adequate lighting.

E8.2.5 Shop Space

- (a) The Contractor shall provide wash facilities and a heated shop space for the inspection contractor for configuration and storage of inspection tools.
 - (i) A wash bay for cleaning the inspection tool for transport complete with a pressure washer capable of supplying 7 LPM at 10,300 kPa.
- (b) The Contractor shall provide a work shop to facilitate maintenance and conversion of inspection tools by the inspection contractor. The work shop shall meet the following minimum requirements:
 - (i) Floor space - 80 m².
 - (ii) Overhead door adequate for unloading of inspection tools and equipment with forklift or wheel loader. Minimum dimensions - 3.66 m x 3.66 m.
 - (iii) The shop must be heated.
 - (iv) Lifting hoist or forklift availability.
 - (v) Electric air compressor with 20 gallon tank (minimum) and capable of supplying 5 cfm at 90 psi.
 - (vi) Power – two (2) 15 amp, 120 volt AC power circuits.
 - (vii) Work tables complete with vice.
- (c) The shop must be accessible to the inspection contractor after hours and during weekends.

E8.3 Method of Measurement and Basis of Payment

E8.3.1 Pipeline Inspection Support Services

- (a) Provision of pipeline inspection support services shall be measured on a daily basis with an hourly overtime rate. Payment shall be for at the unit prices for "Pipeline Inspection Support Services".
- (b) Payment for "Pipeline Inspection Support Services" shall include confined entry support, inspection support, lifting equipment, lighting, pumps and other miscellaneous support as specified herein.
- (c) Time measured shall be based on on-site availability of crews, from the time support crews are present on site, until crews are complete and site secured of the shift, as certified by the Contract Administrator.
- (d) Hourly overtime rate for each hour or portion thereof in excess of the daily minimum rate of 10 hours.
- (e) Installation of tag lines shall be considered incidental to "Piping and Chamber Modifications" and will not be measured for payment. No additional payment will be made.
- (f) Provision of a heated shop shall be considered incidental to "Piping and Chamber Modifications" and will not be measured for payment. No additional payment will be made.

E9. RESTORATION

E9.1 Description

E9.1.1 This specification covers the restoration of work sites.

E9.2 Restoration Works

- (a) Asphaltic Concrete Pavements
 - (i) Patch asphalt pavements in accordance with CW3410.
- (b) Sodding
 - (i) Sod disturbed grassed areas in accordance with CW3510.
- (c) Gravel Surfacing
 - (i) Repair gravel surfaced paths in accordance with CW3150.

E9.3 Measurement and Payment

E9.3.1 Supply and installation of sod shall be measured and paid in accordance with CW 3510.

E9.3.2 Construction of Asphaltic Patches shall be measured and paid in accordance with CW3410

E9.3.3 Gravel surfacing shall be measured and paid in accordance with CW3150.

E9.3.4 Payment for restoration works will be limited to areas disturbed to facilitate construction. Surface restoration outside of the designated construction areas shall be at the Contractors expense.

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 Criminal Record Search Certificate 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: <http://www.commissionaires.mb.ca/> .
- F1.2 Prior to the commencement of any Work specified in F1.1, and during the term of the Contract if additional or replacement individuals are proposed to perform Work, the Contractor shall supply the Contract Administrator with a Criminal Record Search Certificate obtained not earlier than one (1) year prior to the Submission Deadline, or a certified true copy thereof, for each individual proposed to perform such Work.
- F1.3 Any individual for whom a Criminal Record Search Certificate is not provided, or for whom a Criminal Record Search Certificate indicates any convictions or pending charges related to property offences or crimes against another person will not be permitted to perform any Work specified in F1.1.
- F1.4 Any Criminal Record Search Certificate obtained thereby will be deemed valid for the duration of the Contract subject to a repeated records search as hereinafter specified.
- F1.5 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 criminal records search. Any individual who fails to provide a satisfactory Criminal Record Search Certificate as a result of a repeated criminal records search will not be permitted to continue to perform any Work specified in F1.1.