



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 404-2014

**2014 REGIONAL STREET PROGRAM - PORTAGE AVENUE PAVEMENT
REHABILITATION: PART A – EASTBOUND FROM SHERBURN STREET TO
MARYLAND STREET; PART B – WESTBOUND FROM EMPRESS STREET TO
MINTO STREET**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

- B1.1 2014 REGIONAL STREET PROGRAM - PORTAGE AVENUE PAVEMENT REHABILITATION: PART A – EASTBOUND FROM SHERBURN STREET TO MARYLAND STREET; PART B – WESTBOUND FROM EMPRESS STREET TO MINTO STREET

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, July 10, 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. ENQUIRIES

- B3.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.
- B3.2 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.
- B3.3 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.
- B3.4 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.
- B3.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B4. CONFIDENTIALITY

- B4.1 Information provided to a 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.
- B4.2 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.

B5. ADDENDA

- B5.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.

- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>
- B5.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B6.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.

- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B15.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B6.10 Notwithstanding B6.2 to B6.9, in accordance with B7.6, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B15.1(a).

B7. BID COMPONENTS

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices, hard copy;
 - (c) Bid Security
 - (i) Form G1: Bid Bond and Agreement to Bond, or
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or
a certified cheque or draft;
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.
- B7.4.2 A hard copy of Form B: Prices must be submitted with the Bid. If there is any discrepancy between the Adobe PDF version of Form B: Prices and the Microsoft Excel version of Form B: Prices, the PDF version shall take precedence.
- B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B15.1(a).
- B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.8 Bids shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B8. BID

- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 12 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, shall be affixed;
 - (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 For the convenience of Bidders, and pursuant to B7.4.2 and B15.4.2, an electronic spreadsheet Form B: Prices in Microsoft Excel (.xls) format is available along with the Adobe PDF documents for this Bid Opportunity on the Bid Opportunities page at the Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10. QUALIFICATION

B10.1 The Bidder shall:

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

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

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

B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

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

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

- (a) a 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/>).

B10.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

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

B11. BID SECURITY

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

- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in

Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or

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

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

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

B11.1.3 The Bidder shall sign the Bid Bond.

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

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

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

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

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

B12. OPENING OF BIDS AND RELEASE OF INFORMATION

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

B12.1.1 Bidders or their representatives may attend.

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

B12.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>

B12.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>

B12.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B13. IRREVOCABLE BID

- B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.
- B13.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid.

B14. WITHDRAWAL OF BIDS

- B14.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B14.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B14.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
 - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.
- B14.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B13.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

B15. EVALUATION OF BIDS

- B15.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity, or acceptable deviation therefrom (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6.
- B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.
- B15.4 Further to B15.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

- B15.4.1 Further to B15.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.
- B15.4.2 The electronic Form B: Prices and the formulas imbedded in that spreadsheet are only provided for the convenience of Bidders. The City makes no representations or warranties as to the correctness of the imbedded formulas. It is the Bidder's responsibility to ensure the extensions of the unit prices and the sum of Total Bid Price performed as a function of the formulas within the electronic Form B: Prices are correct.

B16. AWARD OF CONTRACT

- B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B16.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B16.2.1 Without limiting the generality of B16.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Bid is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B16.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B15.
- B16.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of:

- (a) Pavement Rehabilitation and Related Works
 - (i) Part A – Eastbound Portage Avenue from Sherburn Street to Maryland Street.
(2014 works)
 - (ii) Part B – Westbound Portage Avenue from Empress Street to Minto Street.
(North lanes 2014/2015 works, south lanes 2015 works)
- (b) Intersection Improvements
 - (i) Eastbound left turn storage lane at Portage Avenue and Clifton Street.
(2015 works)

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

- (a) Pavement Rehabilitation and Related Works
 - (i) Planing existing asphalt pavement
 - (ii) Full depth concrete repairs of existing joints and slabs
 - (iii) Renewal of existing curbs in gutter lanes utilizing slip form paving equipment
 - (iv) Replacement of existing catch basins and catch basin leads
 - (v) Adjustment of catch basins, sewer manholes, appurtenances, and utility manholes
 - (vi) Renewal of existing sidewalk
 - (vii) Installation of detectable warning tiles
 - (viii) Placement of asphalt overlay (Type 1A, average thickness 85 mm)
 - (ix) Boulevard restoration
- (b) Intersection Improvements
 - (i) Removal of existing pavement and median
 - (ii) Placement of base course
 - (iii) Construction of 200 mm reinforced concrete pavement
 - (iv) Construction of concrete safety median
 - (v) Placement of asphalt overlay (Type 1A, thickness 85 mm)

D4. CONTRACT ADMINISTRATOR

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

Kevin Rae, P. Eng.
Senior Transportation Engineer

Telephone No. 204-928-8430
Facsimile No. 204-284-2040

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

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

D5. CONTRACTOR'S SUPERVISOR

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

D5.2 At least two (2) business days prior to the commencement of any Work on the site, the Contractor shall provide the Contract Administrator with a phone number where the supervisor identified in D5.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

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

D11. INSURANCE

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

- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
- (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence;
- (c) an all risks Installation Floater carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.

D11.2 Deductibles shall be borne by the Contractor.

D11.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in the C4.1 for the return of the executed Contract.

D11.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D12. PERFORMANCE SECURITY

D12.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:

- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or

- (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
- (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.

D12.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D12.2 If the bid security provided in his/her Bid was not a certified cheque or draft pursuant to B11.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site and in no event later than the date specified in the 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 or prior to a pre-construction meeting, or at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the C4.1 for the return of the executed Contract.

D14. DETAILED WORK SCHEDULE

D14.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the General Conditions for the return of the executed Contract.

D14.2 The detailed work schedule shall consist of a Gantt chart for the Work acceptable to the Contract Administrator.

D14.3 Further to D14.2, the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.

SCHEDULE OF WORK

D15. COMMENCEMENT

D15.1 The Contractor shall not commence any Work until he/she is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.

D15.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D9;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the twenty-four (24) hour emergency response phone number specified in D5.2.
 - (iv) the Safe Work Plan specified in D10;
 - (v) evidence of the insurance specified in D11;
 - (vi) the performance security specified in D12;
 - (vii) the subcontractor list specified in D14;
 - (viii) the detailed work schedule specified in D14.

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

D15.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.

D16. WORKING DAYS

D16.1 Further to C1.1(jj);

D16.1.1 The Contract Administrator will determine daily if a Working Day has elapsed and will record his/her assessment. On a weekly basis the Contract Administrator will provide the Contractor with a record of the Working Days assessed for the preceding week. The Contractor shall sign each report signifying that he/she agrees with the Contract Administrator's determination of the Working Days assessed for the report period.

D16.1.2 Work done to restore the Site to a condition suitable for Work, shall not be considered "work" as defined in the definition of a Working Day.

D17. RESTRICTED WORK HOURS

D17.1 Further to clause 3.10 of CW 1130, the Contractor shall require written permission forty-eight (48) hours in advance from the Contract Administrator for any work to be performed between 2000 hours and 0700 hours, or on Saturdays, Sundays, Statutory Holidays and or Civic Holidays.

D18. WORK BY OTHERS

D18.1 Work by others on or near the Site will include but not necessarily be limited to:

- (a) City of Winnipeg – Transit Department – removal and replacement of bus shelters and benches;
- (b) City of Winnipeg – Traffic Signals Department – assistance with traffic control;
- (c) City of Winnipeg – Traffic Services Department – miscellaneous sign removal and installation and line painting;
- (d) Manitoba Hydro Gas Division – lowering and/or rock wrapping of underground main and services as required;
- (e) Manitoba Hydro Underground Power – Rebuilding Hydro Manhole vaults in south lanes of Part B during winter of 2014/2015; adjustment of manhole(s) frames as required in spring/summer 2015;
- (f) MTS – Rebuilding MTS Manhole vaults in south lanes of Part B during winter of 2014/2015; removal and reinstallation of existing telephone booth and
- (g) City of Winnipeg – Geomatics Branch – various works on survey monuments.

D19. SEQUENCE OF WORK

D19.1 Further to C6.1, the sequence of work shall be as follows:

D19.1.1 The Work shall be divided into two Parts. Each Part shall be subdivided into stages. Stages are further subdivided into major items of work.

D19.1.2 **Part A - Eastbound Portage Avenue from Sherburn Street to Maryland Street.**

- (a) **Stage I – Eastbound Gutter, South Centre, and Right Turn lanes**
 - (i) Planing of pavement;
 - (ii) Concrete joint and slab repairs;
 - (iii) Catch basin installation and associated underground works;

- (iv) Curb renewals, sidewalk renewals (north half), and adjustment of appurtenances;
 - (v) Complete south half of sidewalk renewal including detectable warning tiles and paving stone band;
 - (vi) Placing topsoil and finish grading;
 - (vii) Placing of scratch course of asphalt and
 - (viii) Laying of sod.
- (b) **Stage II – Eastbound North Centre, Median and Left Turn Lanes**
- (i) Planing of pavement;
 - (ii) Concrete joint and slab repairs;
 - (iii) Curb renewals
 - (iv) Regrading paving stones
 - (v) Sewer repairs;
 - (vi) Adjustment of manholes and appurtenances;
 - (vii) Placing of scratch course of asphalt.
 - (viii) Placing of final asphalt lift on all eastbound lanes

D19.1.3

Part B - Westbound Portage Avenue from Empress Street to Minto Street.

- (a) **Stage I – Westbound Gutter and North Centre Lane (Gutter Lane at Underpass Only)**
- (i) Planing of pavement;
 - (ii) Concrete joint and slab repairs;
 - (iii) Catch basin installation and associated underground works;
 - (iv) Sewer repairs
 - (v) Curb renewals, sidewalk renewals (south half), and adjustment of appurtenances;
 - (vi) Complete north half of sidewalk renewal including detectable warning tiles and paving stone band;
 - (vii) Placing topsoil and finish grading;
 - (viii) Placing of scratch course of asphalt and
 - (ix) Laying of sod.
- (b) **Stage II – Westbound South Centre, Median and Left Turning Lanes**
- (i) Planing of pavement;
 - (ii) Concrete joint and slab repairs;
 - (iii) Construction of Portage Avenue eastbound left turn lane at Clifton Street
 - (iv) Adjustment of manholes and appurtenances;
 - (v) Placing of scratch course of asphalt and
 - (vi) Placing of final asphalt lift on all westbound lanes

D19.1.4

The works of this contract is to be completed in the 2014/2015 construction season. Part A works is sequenced to occur first for completion in 2014. The two north lanes in Part B are available for rehabilitation in 2014. The two south lanes will not be available for rehabilitation till spring of 2015 as Manitoba Hydro and MTS will be completing manhole vaults rebuilds in Part B over the winter of 2014/2015.

D20. CRITICAL STAGES

D20.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) Critical Stage 1 –Part A as described in D2 shall be Substantially completed in Fifty (50) consecutive Working Days of the commencement of the Work as specified in D15.

D20.2 When the Contractor considers the Work associated with Part A to be completed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Completion. 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.

D20.3 The date on which the Part A Work has been accepted by the Contract Administrator as being completed to the requirements of the Contract is the date on which completion of Part A has been achieved.

D21. SUBSTANTIAL PERFORMANCE

D21.1 The Contractor shall achieve Substantial Performance within One Hundred (100) consecutive Working Days of the commencement of the Work as specified in D15.

D21.2 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 re-inspected.

D21.3 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.

D22. TOTAL PERFORMANCE

D22.1 The Contractor shall achieve Total Performance within One Hundred Five (105) consecutive Working Days of the commencement of the Work as specified in D15.

D22.2 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.

D22.3 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.

D23. LIQUIDATED DAMAGES

D23.1 If the Contractor fails to achieve Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Working Day for each and every Working Day following the days fixed herein for same during which such failure continues:

- (a) Critical Stage 1 – Five Thousand dollars (\$5,000.00);
- (b) Substantial Performance – Five Thousand dollars (\$5,000.00);
- (c) Total Performance – One Thousand Five Hundred dollars (\$1,500.00);

D23.2 The amounts specified for liquidated damages in D23.1 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.

D23.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D24. SCHEDULED MAINTENANCE

D24.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Reflective crack maintenance during one year maintenance warranty period as specified in CW 3250; and
- (b) Sod maintenance as specified in CW 3510.

D24.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

D25. ACCELERATED COMPLETION

D25.1 Description

D25.1.1 This Supplemental Condition shall cover the accelerated completion for Part A of this contract.

D25.2 Acceleration of Work

D25.2.1 At no risk to the City, the Contractor at his own initiative, means, and expense, may undertake to complete the Works for Part A of this Contract to facilitate the safe reopening of this phase to traffic and pedestrians in advance of the stipulated working days as specified in D20.

D25.2.2 Reopening of Part A Site shall occur when all Work items listed in D2.1(a)(i) are complete, including streetscaping and Site cleanup.

D25.2.3 In recognition of the fact that an early completion of the Works is of benefit to the City, the City will compensate the Contractor for said early completion on a per diem unit price basis, as hereinafter set out, provided that the City will not be liable to pay for any period of acceleration in excess of eight (8) Working Days.

D25.2.4 It is noted that certain delays of the Work are normal, due to Site conditions, necessary layout and dimensional changes. The Contract Administrator will attempt to resolve each situation as soon as possible. The Contractor is advised that no extension to the number of working Days listed in D20.1 will be given for events of this sort which cause construction delay and are resolved within 48 hours of the requirement of change becoming known to both the Contractor and the Contract Administrator.

D25.3 Method of Measurement

D25.3.1 Subject to clause D25.3 hereof, accelerated completion will be measured on a unit basis per diem. The number of days to be paid for will be the total number of Working Days with which all of the Work is complete and the Part A Site is safely reopened to vehicular and pedestrian traffic in advance of the number of Working Days specified in D19.1.3 with all specified Works listed in D2.1(a)(i) completed and acceptable to the Contract Administrator.

D25.4 Basis of Payment

D25.4.1 Subject to clause D25.3 hereof, accelerated completion will be paid for at the Unit Price per diem specified hereinafter for "Accelerated Completion" which price shall be payment in full for performing all operations undertaken and all other items incidental to the Work included in this Specification. Unit Price per diem = Five thousand dollars (\$5,000).

- D25.4.2 Payment of this item is not identified on Form B: Prices, and shall not be included thereon. If accelerated completion does occur as specified herein, then payment will be made for this item as an addition to the Contract.

CONTROL OF WORK

D26. JOB MEETINGS

- D26.1 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.
- D26.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D27. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D27.1 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).

D28. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D28.1 Further to B10.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B10.4.

MEASUREMENT AND PAYMENT

D29. PAYMENT

- D29.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D30. WARRANTY

- D30.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

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. 404-2014

2014 REGIONAL STREET PROGRAM - PORTAGE AVENUE PAVEMENT REHABILITATION: PART A – EASTBOUND FROM SHERBURN STREET TO MARYLAND STREET; PART B – WESTBOUND FROM EMPRESS STREET TO MINTO STREET

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

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

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

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

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

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

_____ day of _____, 20____ .

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

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

(Date)

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

RE: PERFORMANCE SECURITY – BID OPPORTUNITY NO. 404-2014

2014 REGIONAL STREET PROGRAM - PORTAGE AVENUE PAVEMENT REHABILITATION:
PART A – EASTBOUND FROM SHERBURN STREET TO MARYLAND STREET; PART B –
WESTBOUND FROM EMPRESS STREET TO MINTO STREET

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

(Name of Contractor)

(Address of Contractor)

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

_____ Canadian dollars.

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

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

Partial drawings are permitted.

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

(Address)

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

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

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

(Date)

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

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

This credit is subject to the Uniform Customs and Practice for Documentary Credit (2007 Revision), International Chamber of Commerce Publication Number 600.

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

FORM J: SUBCONTRACTOR LIST
 (See D13)

2014 REGIONAL STREET PROGRAM - PORTAGE AVENUE PAVEMENT REHABILITATION: PART A – EASTBOUND FROM SHERBURN STREET TO MARYLAND STREET; PART B – WESTBOUND FROM EMPRESS STREET TO MINTO STREET

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
SURFACE WORKS:		
Supply of Materials:		
Concrete		
Asphalt		
Base Course & Sub-Base		
Topsoil & Sod		
Installation/Placement:		
Concrete		
Asphalt		
Base		
Topsoil & Sod		
UNDERGROUND WORKS:		
Supply of Materials:		
Frames & Covers		
Catch Basins		
Installation/Placement:		
Catch Basin Leads		
Sewer Televising		
OTHERS:		
Reflective Crack Maintenance		

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
P-3359-01-CT01	Cover Sheet	A1
<u>Part A</u>		
P-3359-02-CT02	Construction Staging Plan (Part A)	A1
P-3359-03-CT03	Plan/Profile Part A – Station 0+080 to Station 0+220	A1
P-3359-04-CT04	Plan/Profile Part A – Station 0+220 to Station 0+360	A1
P-3359-05-CT05	Plan/Profile Part A – Station 0+360 to Station 0+500	A1
P-3359-06-CT06	Plan/Profile Part A – Station 0+500 to Station 0+630	A1
P-3359-07-CT07	Plan/Profile Part A – Station 0+630 to Station 0+770	A1
P-3359-08-CT08	Plan/Profile Part A – Station 0+770 to Station 0+910	A1
P-3359-09-CT09	Plan/Profile Part A – Station 0+910 to Station 1+050	A1
P-3359-10-CT10	Plan/Profile Part A – Station 1+050 to Station 1+170	A1
P-3359-11-CT11	Plan/Profile Part A – Station 1+170 to Station 1+310	A1
<u>Part B</u>		
P-3356-01-CT12	Construction Staging Plan (Part B)	A1
P-3356-02-CT13	Plan/Profile Part B – Station 0+110 to Station 0+220	A1
P-3356-03-CT14	Plan/Profile Part B – Station 0+220 to Station 0+360	A1
P-3356-04-CT15	Plan/Profile Part B – Station 0+360 to Station 0+500	A1
P-3356-05-CT16	Plan/Profile Part B – Station 0+500 to Station 0+630	A1
P-3356-06-CT17	Plan/Profile Part B – Station 0+630 to Station 0+770	A1
P-3356-07-CT18	Plan/Profile Part B – Station 0+770 to Station 0+910	A1
P-3356-08-CT19	Plan/Profile Part B – Station 0+910 to Station 1+050	A1
P-3356-09-CT20	Plan/Profile Part B – Station 1+050 to Station 1+170	A1
P-3356-10-CT21	Plan/Profile Part B – Station 1+170 to Station 1+304	A1

E2. OFFICE FACILITIES

- E2.1 The Contractor shall supply office facilities meeting the following requirements:
- The field office shall be for the exclusive use of the Contract Administrator.
 - The building shall be conveniently located near the site of the Work.
 - The building shall have a minimum floor area of 25 square metres, a height of 2.4m with two windows for cross ventilation and a door entrance with a suitable lock.

- (d) The building shall be suitable for all weather use. It shall be equipped with an electric[electric] heater and air conditioner so that the room temperature can be maintained between either 16-18°C or 24-25°C.
- (e) The building shall be adequately lighted with fluorescent fixtures and have a minimum of three wall outlets.
- (f) The building shall be furnished with one desk, one drafting table, table 3m x 1.2m, one four drawer legal size filing cabinet, and a minimum of 12 chairs.
- (g) A portable toilet shall be located near the field office building. The toilet shall have a locking door and be for the exclusive use of the Contract Administrator and other personnel from the City.
- (h) The field office building and the portable toilet shall be cleaned on a weekly basis immediately prior to each site meeting. The Contract Administrator may request additional cleaning when he/she deems it necessary.

E2.2 The Contractor shall be responsible for all installation and removal costs, all operating costs, and the general maintenance of the office facilities.

E2.3 The office facilities will be provided from the date of the commencement of the Work to the date of Total Performance.

E3. PROTECTION OF EXISTING TREES

E3.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area:

- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
- (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.
- (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
- (d) Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
- (e) Work on-site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.

E3.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his/her designate.

E3.3 No separate measurement or payment will be made for the protection of trees.

E3.4 Except as required in clause E3.1(c) and E3.1(e), Elm trees shall not be pruned at any time between April 1 and July 31.

E4. TRAFFIC CONTROL

E4.1 Further to clauses 3.6 and 3.7 of CW 1130:

- (a) Where directed, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planing drop-offs to the satisfaction of the Contract Administrator. Payment shall be in accordance with CW3410.
- (b) In accordance with the Manual of Temporary Traffic Control in Work Areas on City Streets, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Branch of the City of Winnipeg to place all temporary regulatory signs. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by the Traffic Services Branch of the City of Winnipeg in connection with the works undertaken by the Contractor.

E5. TRAFFIC MANAGEMENT

E5.1 Further to clause 3.7 of CW 1130:

- E5.1.1 Maintain a minimum of three (3) lanes of eastbound Portage Avenue traffic from Sherburn Street to Maryland Street during the morning peak hours (7:00 a.m. to 9:00 a.m., Monday to Friday). During none peak hours maintain a minimum of two (2) eastbound lanes.
- E5.1.2 Maintain a minimum of two (2) lanes of westbound Portage Avenue traffic from Minto Street to Empress Street at all times.
- E5.1.3 The Contractor will be allowed to close alternating side street approaches on the south side of Portage Avenue for Part A and the north side of Portage Avenue for Part B in order to complete the works. The Contractor is to maintain a minimum of one lane of traffic for northbound Wall Street and Southbound Erin Street and is also to maintain access to the off ramp to northbound Empress Street. Ramping of asphalt may be required to open a street to traffic prior to final asphalt paving.
- E5.1.4 A "Construction Staging Plan" has been included in the drawing package for the Contractor's reference.
- E5.1.5 Private approach access shall be maintained at all times.
- E5.1.6 Pedestrian access to all businesses must be maintained during regular business hours.
- E5.1.7 In addition to the requirements above, the Contractor shall minimize all street and lane closures during construction and coordinate all such activities with the City of Winnipeg.
- E5.1.8 Where left turn lanes exist, an additional lane to accommodate the left turn storage lane shall be maintained at all times.
- E5.1.9 Pedestrian and ambulance/emergency vehicle access must be maintained at all times. A two (2) stage sidewalk construction plan has been proposed in the drawing package on the "Construction Staging Plan" to ensure pedestrian access and safety.

E6. PEDESTRIAN SAFETY

- E6.1 During the project a temporary snow fence shall be installed between the pedestrian sidewalk and the construction traffic during Stage 1A and 1B for both Parts A and B. The Contractor shall be responsible for maintaining the snow fence in a proper working condition. No measurement for payment shall be made for this work.

E7. WATER OBTAINED FROM THE CITY

- E7.1 Further to clause 3.7 of CW 1120, the Contractor shall pay for all costs, including sewer charges, associated with obtaining water from the City in accordance with the Waterworks and Sewer By-laws.

E8. SURFACE RESTORATIONS

- E8.1 Further to clause 3.3 of CW 1130, when Total Performance is not achieved in the year the Contract is commenced, the Contractor shall temporarily repair any Work commenced and not

completed to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator until permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

E9. INFRASTRUCTURE SIGNS

E9.1 The Contractor shall obtain infrastructure signs from the Traffic Services Sign Shop at 421 Osborne Street. The Contractor shall mount each sign securely to a rigid backing material approved by the Contract Administrator. The Contractor shall fasten each sign to a suitable support and erect and maintain one sign at each street as directed by the Contract Administrator. When the Contract Administrator considers the Work on the street complete, the Contractor shall remove and dispose of the signs and supports. No measurement for payment will be made for performing all operations herein described and all other items incidental to the work described

E10. SUPPLY AND INSTALLATION OF PAVEMENT REPAIR FABRIC

DESCRIPTION

E10.1 General

E10.1.1 This specification covers the supply and installation of pavement repair fabric.

E10.1.2 Referenced Standard Construction

(a) CW 3130 – Supply and Installation of Geotextile Fabrics.

MATERIALS

E10.2 Storage and Handling

E10.2.1 Store and handle material in accordance with Section 2 of CW 3130.

E10.3 Pavement Repair Fabric

E10.3.1 Pavement repair fabric will be Glas Grid Road Reinforcement Mesh - Style 8501 or approved equal.

CONSTRUCTION METHODS

E10.4 General

E10.4.1 Install pavement repair fabric at random locations as directed by the Contract Administrator.

E10.4.2 The extent of the placement limits and quantities required will be determined by the Contract Administrator and provided 48 hours prior to the placement of asphalt.

E10.4.3 Proceed with installation upon completion and acceptance of the asphalt levelling course.

E10.4.4 Install fabric in accordance with the manufacturer's specifications and recommendations.

E10.4.5 Only construction equipment required to place the final asphalt surface course will be allowed to travel on the exposed fabric.

E10.4.6 Replace damaged or improperly placed fabric.

E10.4.7 Ensure temperature of the asphalt material does not exceed the melting point of the fabric.

MEASUREMENT AND PAYMENT

E10.5 Pavement Repair Fabric

- E10.5.1 The supply and installation of the pavement repair fabric will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Pavement Repair Fabric". The area to be paid for will be the total number of square metres of pavement repair fabric supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.

E11. INSTALLATION OF INTERLOCKING PAVING STONES

DESCRIPTION

- E11.1 General
- E11.1.1 This specification shall supplement and amend the City of Winnipeg Standard Construction Specification CW 3330 "Installation of Interlocking Paving Stones".
- E11.1.2 Referenced Standard Construction Specifications
(a) CW 3330 – Installation of Interlocking Paving Stones
- E11.1.3 Referenced Standard Detail
(a) SD-240A – Interlocking Paving Stone Detail for Medians and Private Approaches

MATERIALS

- E11.2 Interlocking Paving Stones
- E11.2.1 Paving stones to be installed as detailed on the drawings.
- E11.2.2 100 x 200 Blue Hollard Pavers in Soldier Course shall be installed at Winnipeg Transit bus stops at locations noted on the drawings.
- E11.2.3 200 x 200 Holland Stone Charcoal color running band to be installed as per the drawings.
- E11.2.4 Paving stones shall conform to the requirements of CAN3-A231.2, Precast Concrete Pavers.
- E11.2.5 Further to CAN3-A231.2.6.1.1, where concrete pavers are shipped for installation before the pavers are twenty-eight (28) days old, the average compressive strength of these pavers at the time of delivery to the work site shall be not less than 40 MPa.

MEASUREMENT AND PAYMENT

- E11.3 Measurement and payment will be in accordance with CW 3330 "Installation of Interlocking Paving Stones".

E12. REMOVAL AND RE-INSTALLATION OF BIKE RACKS

DESCRIPTION

- E12.1 General
- E12.1.1 This specification covers the removal, salvaging and re-installation of existing bike racks to facilitate construction.

CONSTRUCTION METHODS

- E12.2 Removal and Salvage of Bike Racks
- E12.2.1 Existing bike racks designated for removal to facilitate construction shall be carefully removed and salvaged. All components and all hardware shall be salvaged for reuse and stockpiled at locations designated by the Contract Administrator.
- E12.2.2 In the event of damage to any materials by the Contractor, the Contractor shall immediately notify the Contract Administrator and make all repairs or replacements

necessary, at his own expense, to the satisfaction of the Contract Administrator. In no case shall the Contractor reinstall a damaged component.

E12.3 Re-Installation of Salvaged Bike Racks

E12.3.1 Re-install salvaged bike racks to the satisfaction of the Contract Administrator.

MEASUREMENT AND PAYMENT

E12.4 Remove and Reinstall Bike Racks

E12.4.1 The removal and re-installation of existing bike racks will be measured on a unit basis and paid for at the Contract Unit Price for "Remove and Reinstall Bike Racks". The number to be paid for will be the total number of bike racks removed and re-installed in accordance with this specification, accepted and measured by the Contract Administrator.

E13. ADJUSTMENT OF UTILITY MANHOLE FRAMES

DESCRIPTION

E13.1 General

E13.1.1 This specification covers the adjustment of MTS Allstream Inc. manholes which works include but are not limited to removing the existing frame, making any required changes to the structure to accommodate new frame installation, installing a new frame, lifter ring and cover and constructing any required temporary asphalt ramps.

E13.1.2 Pavement removal and replacement will be in accordance with Specifications CW 3100 and CW 3230.

E13.1.3 The Contractor is to provide 48 hour notice to the utility organization and the Contract Administrator prior to undertaking any of the proposed works on the utility manholes.

E13.1.4 The Contractor to make arrangements through the Utility organization for watch personnel to be present during construction of the required works to the utility manholes.

E13.1.5 Referenced Standard Construction Specifications

(a) CW 3110 – Sub-Grade, Sub-Base and Base Course Construction;

(b) CW 3230 – Full-Depth Patching of Existing Slabs and Joints.

MATERIALS

E13.2 Manhole Frames, Covers and Riser Rings

E13.2.1 Utility manhole frames, covers and frame riser rings will be provided by MTS Allstream Inc.

CONSTRUCTION METHODS

E13.3 Removal of Existing Pavement

E13.3.1 Remove complete concrete slab surrounding utility manhole in accordance with Specification CW 3110.

E13.3.2 Removal procedures to be done in a manner not to damage utility manhole structure.

E13.4 Removal of Manhole Frame and Cover

E13.4.1 Remove the required concrete embedding the frame and remove the frame and cover. Utility Watch personnel to approve construction method prior to proceeding. The Contractor is to provide opportunity for MTS Allstream Inc. to collect the old utility frame and cover, otherwise the old utility frame and covers are to be disposed of off-site as directed by the Contract Administrator.

E13.5 Installation of New Frame, Cover and Riser Ring

- E13.5.1 Install new frame, cover and riser ring as specified herein and or on the drawings. Existing frames identified as being in good condition are to be reused.
- E13.5.2 Frame to be installed below final grade for installation of one frame riser ring (50mm).
- E13.6 Construct temporary asphalt ramp
- E13.6.1 Where required for re-opening lane to traffic, construct temporary asphalt ramp to the grades as noted on the drawings and as directed by the Contract Administrator.

MEASUREMENT AND PAYMENT

- E13.7 Adjustment of Utility Manhole Frame and Installation of Riser Ring
- E13.7.1 Adjustment of utility manhole frames and installation of riser rings will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Adjustment of MTS Frame / Installation of 50mm Steel Ring Riser". The number of units to be paid for will be the total number of utility manhole frames c/w covers and riser rings installed in accordance with this specification, accepted and measured by the Contract Administrator.
- E13.8 Concrete Pavement removal and replacement will be measured and paid for in accordance with Specification CW 3230.

E14. TREE WELLS

DESCRIPTION

- E14.1 General
- E14.1.1 This specification covers the construction of tree wells, including but not limited to construction of the concrete tree well curbing, placement of planting medium soil and the installation of precast concrete tree covers.
- E14.1.2 Referenced Standard Construction Specifications
 - (a) CW 3310 – Portland Cement Concrete Pavement Works

MATERIALS

- E14.2 Concrete
- E14.2.1 Concrete for tree well curbing construction to be in accordance with CW 3310.
- E14.3 Reinforcing Steel
- E14.3.1 Reinforcing steel for tree well curbing construction to be in accordance with CW 3310.
- E14.4 Planting Medium Soil
- E14.4.1 Mix imported topsoil with 20% peatmoss loose by volume, and 5% sand loose by volume. Incorporate bonemeal into planting soil at rate of 5 lbs /cu.yd. of soil mixture. Planting soil items to be comprised as follows:
 - (a) Peatmoss: horticultural grade Class "A" decomposed plant material, fairly elastic and homogeneous. Free of decomposed colloidal residue, weed, sulphur and iron. To have pH value of 5.9 to 7.0, 60% organic matter by weight, moisture content not exceeding 15% and water absorption capacity of not less than 300% by weight on oven dry basis.
 - (b) Bonemeal: shall be raw bonemeal, finely ground with a minimum analysis of 3% nitrogen and 20% phosphoric acid.
 - (c) Imported topsoil: natural, fertile, agricultural soil typical of locality, capable of sustaining vigorous plant growth, from well drained Site that is free of flooding, not in frozen or muddy condition, not less than 6% organic matter to a maximum 25% organic matter by volume, and pH value of 5.9 to 7.0. Free from subsoil, slag or clay,

stones, lumps, live plants and their roots, sticks, crabgrass, couchgrass, noxious weeds and foreign matter.

- (d) Sand: hard, granular natural beach sand, washed free of impurities, chemical or organic matter.

E14.5 Precast Concrete Tree Cover

- E14.5.1 Precast concrete tree cover to be Barkman Item No. 45-48000 1.219m x 1.829m rectangle paver insert - 2 piece or approved equal.

CONSTRUCTION METHODS

E14.6 General

- E14.6.1 The Contractor must ensure that all buried utilities and services are located and if necessary, protected and exposed prior to any excavation in accordance with Specification CW 1120.

E14.7 Tree Well Construction

- E14.7.1 Hydro-excavate around existing tree pit to extend it to the dimensions shown on the drawing in accordance with E16. The Contractor is to make arrangements for City of Winnipeg Forestry personnel to be on site during hydro-excavation to ensure exposure of tree roots is acceptable.
- E14.7.2 Construct tree well curbing in accordance with Specification CW 3310 and the drawings.
- E14.7.3 Backfill to grade shown on the drawings with planting medium soil compacting sufficiently to provide good soil consistency and to minimize settlement.
- E14.7.4 Supply and install precast tree covers on tree well curbing as per manufactures installation instructions.

MEASUREMENT AND PAYMENT

E14.8 Tree Well Curbing

- E14.8.1 Construction of tree well curbing will be measured on a linear bases and paid for at the Contract Unit Price per metre for "Tree Well Curbing". The length to be paid for will be the total number of metres constructed in accordance with this specification, accepted and measured by the Contract Administrator.

E14.9 Precast Concrete Tree Covers.

- E14.9.1 Supply and installation of precast concrete tree covers will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Supply and Install Precast Concrete Tree Covers". The number of units to be paid for will be the total number of precast concrete tree covers installed in accordance with this specification, accepted and measured by the Contract Administrator.

E14.10 Planting Medium Soil

- E14.10.1 Installation planting medium soil will be measured on a volume basis and paid for at the Contract Unit Price per cubic metre for "Install Planting Medium Soil". The volume to be paid will be the total number of cubic metres installed in accordance with this specification, accepted and measured by the Contract Administrator.

E14.11 Hydro Excavation

- E14.11.1 Hydro excavation will measured and paid for in accordance with E16 Hydro Excavation.

E15. REMOVAL OF CONCRETE/I-BEAM PILES

DESCRIPTION

E15.1 General

- E15.1.1 This specification covers the removal of combined concrete and I-Beam piles at locations identified on the construction drawings.
- E15.1.2 Referenced Standard Construction Specifications
- (a) CW 3110 – Subgrade, Sub-Base, Base Course Construction.

CONSTRUCTION METHODS

E15.2 Removal of Combined Concrete and I-Beam Piles

- (a) Contractor to remove or demolish concrete foundation and I-Beam to a minimum of 1.0m below the elevation of the surface of the adjacent sidewalk and paving stones.

MEASUREMENT AND PAYMENT

E15.3 Removal of Combined Concrete and I-Beam Piles

- (a) Removal of Combined Concrete and I-Beam Piles will be measured on a per item basis and paid for at the Contract Unit Price per each for "Remove Concrete/I Beam Pile". The number to be paid will be the total number of piles removed in accordance with this specification, accepted and measured by the Contract Administrator.

E16. HYDRO EXCAVATION

DESCRIPTION

E16.1 General

- (a) This specification shall cover the removal of earthen material immediately adjacent to underground utilities infrastructure by means of high pressure water spray, and the recovery of evacuated material by vacuum type means or equivalent method as approved by the Contract Administrator.
- (b) This specification shall also cover Hydro excavation around existing trees in tree pit applications for the work under E14 Tree Wells.

E16.2 Equipment

- (a) Hydro excavation unit shall be capable of maintaining a minimum working pressure of 10,000 psi, at a rate of flow of 10 to 12 gallons per minute. Unit should be adjustable, so as to provide adequate pressure to remove earthen material identified by the Contract Administrator.
- (b) Spray head shall be equipped with a rotating type nozzle, in order to provide a wider path of cut.

E16.3 Construction Methods

- (a) Hydro-removal of earthen material
 - (i) Earthen material adjacent to utility entity shall be sprayed with high pressure water so as to remove all such material identified by the Contract Administrator.
 - (ii) Earthen material adjacent to tree roots for tree well construction shall be sprayed with controlled pressure water so as to not cause damage to the tree. The contractor must make arrangements to have personnel for City Forestry present during Hydro Excavation for tree well construction.

E16.3.1 Recovery of Excavated Material

- (a) The recovery of excavated material shall be done using vacuum type method, or other type method as approved by the Contract Administrator.
- (b) The recovery of material shall follow immediately behind the excavation, to avoid excavated areas from filling with excavated material.
- (c) The use of mechanical sweepers will not be allowed.
- (d) Dispose of material in accordance with Section 3.4 of CW 1130.

E16.3.2 Backfill of Hydro Excavated Hole

- (a) The Contractor shall be responsible for the backfill of the hydro excavated hole upon the completion of the Work described herein, to the approval of the Contract Administrator.

E16.4 Measurement and Payment

E16.4.1 Hydro Excavation

- (a) Hydro Excavation of earthen material will be measured on an hourly basis and paid for at the Contract Unit Price per hour for "Hydro Excavation". The hours to be paid for will be the total number of hours of Hydro Excavation in accordance with this specification, accepted and measured by the Contract Administrator. Travel to and from the Site will not be accounted for in the payment of this item.

E17. OPERATING CONSTRAINTS FOR WORK IN CLOSE PROXIMITY TO THE 900 FEEDERMAIN AND 400 WATERMAIN

E17.1 Description

- E17.1.1 This Section details operating constraints for all work to be carried out in close proximity to 900mm feedermain and 400mm watermain in Part A. Close proximity shall be deemed to be any construction activity within a 5 m offset from the centreline of the feedermain and 3m offset from the centreline of the watermain.

E17.2 General Considerations for Work in Close Proximity to the feedermain and watermain.

- E17.2.1 Work around the feedermain and watermain shall be planned and implemented to minimize the time period that work is carried out in close proximity to the pipe and to ensure that the pipeline is not subjected to excessive construction related loads, including excessive vibrations and/or concentrated or asymmetrical lateral loads during backfill placement.

- E17.2.2 Generally, for pavement rehabilitations, there will be little risk posed to the pipelines, but certain aspects of construction including joint and slab repairs, repairs and installation of drainage appurtenances, and extended vibration of asphaltic concrete directly over pipelines can impose additional stresses on these pipelines, and specifically, loosening on pipe jointing materials including copper water stops, lead caulked joints and aged rubber gasketed joints.

E17.3 Submittals

- E17.3.1 Where slab and joint repairs or installation of drainage appurtenances are in close proximity to pipelines, submit a Construction Method Statement with proposed construction plan including haul routes, excavation equipment locations, loading positioning and base construction sequencing, to the Contract Administrator for review seven (7) days prior to construction. Do not commence construction until the Construction Method Statement has been reviewed and accepted by the Contract Administrator.

E17.4 Protection of Feedermain During Construction

- E17.4.1 Contractors carrying out repair work or working in close proximity to the feedermain and watermain shall meet the following conditions and technical requirements:
 - (a) Pre-Work, Planning and General Execution

- (i) No work shall commence at the site until the Equipment Specifications and Construction Method Statement have been submitted and accepted, and the feedermain and watermain locations have been clearly delineated in the field. Work over the feedermain and watermain shall only be carried out with equipment that has been reviewed and quantified in terms of its loading implications on the pipe. All proposed construction equipment must be submitted to Contract Administrator for review prior to construction. Work in areas in close proximity to the feedermain and watermain shall only be carried out with equipment that has been reviewed and quantified in terms of its loading implications by the Contract Administrator.
 - (ii) Contact the City of Winnipeg WWD Department, Construction Services Coordinator (Andy Vincent) prior to construction involving removal and placement of pavement slab and joint repairs or installation of drainage appurtenances.
 - (iii) Notify WWD well in advance of construction to coordinate required service interruptions
 - (iv) Crossings of the feedermain is prohibited in the time period from removal of existing pavement until the completion of granular base construction. At all times prior to completion of final paving; reduce equipment speeds to levels that minimize the effects of impact loading to the pipe
 - (v) For construction work activities either longitudinally or transverse to the alignment of the feedermain and watermain, work only with equipment and in the manner stipulated in the accepted Construction Method Statement and the supplemental requirements noted herein.
 - (vi) Construction operations should be staged in such a manner as to limit multiple construction loads at one time, (e.g. offset crossings sufficiently from each other, rollers should remain a sufficient distance behind spreaders to limit loads. A reasonable offset distance is 3m between loads).
 - (vii) The contractor and all site supervisory personnel and equipment operators have to be formally briefed to ensure that they are fully cognizant of the associated restrictions, constraints, and risks associated with working adjacent to and over this pipeline. New personnel introduced after commencement of the project need to be formally orientated as to the significance and constraints associated with working over the feedermain and watermain.
- (b) Demolition and Excavation
- (i) Use of pneumatic concrete breakers within 3 metres of feedermain or watermain is prohibited. Pavement shall be full depth sawcut and carefully removed. Use of hand held jackhammers for pavement removal will be allowed.
 - (ii) Where there is less than 1.6 metres of earth cover over the feedermain or watermain and further excavation is required either adjacent to or over the feedermain or watermain, utilize only smooth edged excavation buckets, soft excavation or hand excavation techniques. Where there is less than 1 metre of cover over the feedermain or watermain, carefully expose the feedermain or watermain by hand excavation to delineate the location and depth of the main, and provide full time supervision of the excavation.
 - (iii) Where there is less than 2.5 m of earth cover over the feedermain or watermain, offset backhoe or excavation equipment from feedermain or watermain, a minimum of 3 m from the centerline, to carry out excavation.
 - (iv) Equipment should not be allowed to operate while positioned directly over the feedermain or watermain.
- (c) Subgrade Construction
- (i) Subgrade compaction shall be prohibited within 2 metres of the feedermain or watermain. Subgrade compaction within 3 metres of the feedermain or watermain shall be limited to non-vibratory methods only.
 - (ii) Subgrade, sub-base and base course construction shall be kept in a rut free condition at all times. Construction equipment is prohibited from crossing pipelines if the grade is insufficient to support the equipment without rutting.

- (iii) Subgrade conditions should be inspected by personnel with competent geotechnical experience (e.g. ability to adequately visually classify soils and competency of subgrade, subbase, and base course materials). In the event of encountering unsuitable subgrade materials above the feedermain or watermain, proposed design revisions shall be submitted to this office for review to obtain approval from the Water and Waste Department relative to any change in conditions.
 - (iv) Construction operations shall be staged to minimize the time period between excavation to subgrade and placement of granular subbase materials. Should bare subgrade be left overnight, measures shall be implemented to protect the subgrade against inadvertent travel over it and to minimize the impact of wet weather.
- (d) Subbase and Base Course Construction
- (i) Granular material, construction material, soil or other material shall not be stockpiled on the pipelines or within 5 metres of the pipe centerline.
 - (ii) Subbase or base course materials shall not be dumped directly on pipelines but shall be stockpiled outside limits noted in these recommendations and shall be carefully bladed in-place.
 - (iii) Subbase compaction within 3 metres of the centreline of the feedermain or watermain shall be either carried out by static methods (without vibration) or with smaller approved equipment such as hand held plate packers or smaller roller equipment.
- (e) Asphaltic Concrete Overlays
- (i) When installing asphaltic concrete overlays over the feedermain, non-vibratory compaction only should be used within 3 metres of the centre of the pipeline.

E17.5 All costs associated with the work in close proximity to the feedermain and watermain shall be incidental to the applicable type of pavement construction and no additional payment shall be made.