



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 568-2011**

**2010 ACTIVE TRANSPORTATION INFRASTRUCTURE STIMULUS PROGRAM –  
SEINE RIVER PATHWAY – 1201 ST. ANNE'S ROAD TO SHOREHILL DRIVE**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

- B1.1 2010 ACTIVE TRANSPORTATION INFRASTRUCTURE STIMULUS PROGRAM – SEINE RIVER PATHWAY – 1201 ST. ANNE’S ROAD TO SHOREHILL DRIVE

### **B2. SUBMISSION DEADLINE**

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, July 15, 2011.
- 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 D3.1.
- 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. ADDENDA**

- B4.1 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.
- B4.2 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.
- B4.2.1 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>
- B4.2.2 The Bidder is responsible for ensuring that he 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.
- B4.3 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.

## **B5. SUBSTITUTES**

- B5.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B5.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B5.3 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.
- B5.4 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.
- B5.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his 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.
- B5.6 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.
- B5.6.1 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 wishes to inform.
- B5.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B5.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his 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 B14.
- B5.9 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.
- B5.10 Notwithstanding B5.2 to B5.9, in accordance with B6.6, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

## **B6. BID COMPONENTS**

B6.1 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;

B6.2 Further to B6.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B5.

B6.3 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.

B6.4 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.

B6.4.1 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.

B6.4.2 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.

B6.5 Bidders are advised not to include any information/literature except as requested in accordance with B6.1.

B6.6 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 B14.1(a).

B6.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B6.8 Bids shall be submitted to:

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

## **B7. BID**

B7.1 The Bidder shall complete Form A: Bid, making all required entries.

B7.2 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 own name, his 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 own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B7.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.

B7.3 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.

B7.4 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 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 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.

B7.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B7.5 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.

## **B8. PRICES**

B8.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B8.1.1 For the convenience of Bidders, and pursuant to B6.4.2 and B14.4.3, 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>

B8.2 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.

B8.3 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.

B8.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B9. QUALIFICATION**

B9.1 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.

- B9.2 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>
- B9.3 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);
- B9.4 Further to B9.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
  - (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>)
- B9.5 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.
- B9.6 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.

## **B10. BID SECURITY**

- B10.1 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.
- B10.1.1 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.
- B10.1.2 All signatures on bid securities shall be original.
- B10.1.3 The Bidder shall sign the Bid Bond.



- B10.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.
- B10.2 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.
- B10.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B10.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.
- B10.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.
- B10.3 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.

## **B11. OPENING OF BIDS AND RELEASE OF INFORMATION**

- B11.1 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.
- B11.1.1 Bidders or their representatives may attend.
- B11.1.2 Bids determined by the Manager of Materials, or his designate, to not include the bid security specified in B10 will not be read out.
- B11.2 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>
- B11.3 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>
- B11.4 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.

## **B12. IRREVOCABLE BID**

- B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.
- B12.2 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.

## **B13. WITHDRAWAL OF BIDS**

- B13.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

- B13.1.1 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.
- B13.1.2 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.
- B13.1.3 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 B13.1.3(b), declare the Bid withdrawn.
- B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 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.

#### **B14. EVALUATION OF BIDS**

- B14.1 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 B9 (pass/fail);
  - (c) Total Bid Price;
  - (d) economic analysis of any approved alternative pursuant to B5.
- B14.2 Further to B14.1(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.
- B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.
- B14.4 Further to B14.1(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.
- B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.
- B14.4.2 Further to B14.1(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.
- B14.4.3 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.

**B15. AWARD OF CONTRACT**

- B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B15.2 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.
- B15.2.1 Without limiting the generality of B15.2, 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.
- B15.3 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 B14.
- B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his 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](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) Construction of limestone pathway
  - (i) 1201 St. Anne's Road to Shorehill Drive
  - (ii) St. Anne's Road to east of 919 St. Anne's Road

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

- (a) Construction of limestone pathway
  - (i) Removal of existing limestone pathway;
  - (ii) Removal of existing soil and debris;
  - (iii) Removal of existing trees;
  - (iv) Removal of existing barb wire fence;
  - (v) Supply and installation of culverts;
  - (vi) Supply and installation of limestone pathway;
  - (vii) Placement of topsoil and sod;
  - (viii) Supply and planting of trees.

#### **D3. CONTRACT ADMINISTRATOR**

D3.1 The Contract Administrator is Stantec Consulting Ltd., represented by:

Susan Russell, M.A.L.A., C.S.L.A.  
McGowan Russell Group  
200-120 Fort St  
Winnipeg, MB R3C 1C7

Telephone No. (204) 956-0396  
Facsimile No. (204) 956-1265

D3.2 At the pre-construction meeting, Susan Russell, M.A.L.A., C.S.L.A. will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

#### **D4. CONTRACTOR'S SUPERVISOR**

D4.1 At the pre-construction meeting, the Contractor shall identify his designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D4.2 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 D4.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

## **D5. NOTICES**

- D5.1 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.
- D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.
- D5.3 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
- D5.4 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 address or facsimile number:
- The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

## **D6. FURNISHING OF DOCUMENTS**

- D6.1 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 at cost.

## **SUBMISSIONS**

### **D7. AUTHORITY TO CARRY ON BUSINESS**

- D7.1 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.

### **D8. SAFE WORK PLAN**

- D8.1 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.
- D8.2 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>

## **D9. INSURANCE**

D9.1 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, The Province of Manitoba and The Government of Canada including authorized officials and representatives of the aforementioned, added as an additional insured, such liability policy to a cross-liability clause, contractual liability, unlicensed motor vehicle liability (contractors' equipment), nonowned 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;
  - (i) Completed operations cover shall extend for a minimum of twenty-four (24) months beyond Total Performance date;
  - (ii) The policy shall provide coverage for the aforementioned entities as well as all contractors and consultants and their directors, officers, employees and agents. A wrap-up liability policy, covering the entire scope of the Work may be purchased in place of a commercial general liability policy;
- (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) to be retained at all times during the performance of the Work and until the date of Total Performance; such insurance may be met through the commercial general liability cover where applicable;
- (c) Builder's Risk insurance (Broad Form) including testing and commissioning, in the amount of one hundred percent (100%) of the total construction costs; written in the name of the Contractor, The City of Winnipeg and all other contractors, sub-contractors, engineering and architectural consultants etcetera;
- (d) Any other insurances, carrying suitable limits and deductibles, as may be required to cover the scope of the Work.

D9.2 All Policies shall be taken out with insurers licensed to and carrying on business in the Province of Manitoba.

D9.3 Deductibles shall be borne by the Contractor.

D9.4 The Contractor shall provide the Contract Administrator with a certificate of insurance of each policy, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work on the site.

D9.5 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.

D9.6 The Contractor shall provide written notice to the City of Winnipeg of any material changes to their policies within thirty (30) days of the change taking effect.

D9.7 The City shall have the right to alter the limits and /or coverage's as reasonably required from time to time during continuance of this agreement.

## **D10. PERFORMANCE SECURITY**

D10.1 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.

D10.1.1 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.

D10.2 If the bid security provided in his Bid was not a certified cheque or draft pursuant to B10.1(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.

#### **D11. SUBCONTRACTOR LIST**

D11.1 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.

#### **D12. DETAILED WORK SCHEDULE**

D12.1 The Contractor shall provide the Contract Administrator with a detailed work schedule (Form L: 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.

### **SCHEDULE OF WORK**

#### **D13. COMMENCEMENT**

D13.1 The Contractor shall not commence any Work until he is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.

D13.2 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 D7;
  - (ii) evidence of the workers compensation coverage specified in C6.15;
  - (iii) the twenty-four (24) hour emergency response phone number specified in D4.2.
  - (iv) the Safe Work Plan specified in D8;
  - (v) evidence of the insurance specified in D9;
  - (vi) the performance security specified in D10;
  - (vii) the subcontractor list specified in D11;
  - (viii) the detailed work schedule specified in D12; and
- (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.

D13.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.

D13.4 The Contractor shall provide seventy-two (72) hours notice to 919 St. Anne’s Road and 999 St. Anne’s Road that the Work adjacent to these properties will commence.



#### **D14. WORKING DAYS**

D14.1 Further to C1.1(gg);

D14.1.1 The Contract Administrator will determine daily if a Working Day has elapsed and will record his 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 agrees with the Contract Administrator's determination of the Working Days assessed for the report period.

D14.1.2 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.

#### **D15. RESTRICTED WORK HOURS**

D15.1 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.

#### **D16. WORK BY OTHERS**

D16.1 Work by others on or near the Site will include but not necessarily be limited to:

- (a) Multi-family residential construction near Creek Bend Road;

#### **D17. SUBSTANTIAL PERFORMANCE**

D17.1 The Contractor shall achieve Substantial Performance within thirty-five (35) consecutive Working Days of the commencement of the Work as specified in D13.

D17.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D17.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

#### **D18. TOTAL PERFORMANCE**

D18.1 The Contractor shall achieve Total Performance within forty (40) consecutive Working Days of the commencement of the Work as specified in D13.

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

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

#### **D19. LIQUIDATED DAMAGES**

D19.1 If the Contractor fails to achieve Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the

following amounts per Working Day for each and every Working Day following the days fixed herein for same during which such failure continues:

- (a) Substantial Performance – Two-thousand dollars (\$2,000.00);
- (b) Total Performance – Five-hundred dollars (\$500.00).

D19.2 The amounts specified for liquidated damages in D19.1 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.

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

## **D20. SCHEDULED MAINTENANCE**

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

- (a) Maintenance of sodding as specified in CW3510;
- (b) Maintenance of plantings as specified in E21 and E22.

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

## **CONTROL OF WORK**

### **D21. JOB MEETINGS**

D21.1 Regular weekly job meetings will be held at 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 deems it necessary.

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

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

## **MEASUREMENT AND PAYMENT**

### **D23. PAYMENT**

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

## **WARRANTY**

### **D24. WARRANTY**

- D24.1 Notwithstanding C13.2, the warranty period shall begin on the date of Substantial 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 D9)

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. 568-2011

2010 ACTIVE TRANSPORTATION INFRASTRUCTURE STIMULUS PROGRAM – SEINE RIVER  
PATHWAY – 1201 ST. ANNE'S ROAD TO SHOREHILL DRIVE

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 D9)

\_\_\_\_\_  
(Date)

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

RE: PERFORMANCE SECURITY – BID OPPORTUNITY NO. 568-2011

2010 ACTIVE TRANSPORTATION INFRASTRUCTURE STIMULUS PROGRAM – SEINE RIVER  
PATHWAY – 1201 ST. ANNE'S ROAD TO SHOREHILL DRIVE

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

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

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

\_\_\_\_\_ Canadian dollars.

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

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

Partial drawings are permitted.

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

\_\_\_\_\_  
(Address)

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

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

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

\_\_\_\_\_  
(Date)

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

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

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

\_\_\_\_\_  
(Name of bank or financial institution)

Per: \_\_\_\_\_  
(Authorized Signing Officer)

Per: \_\_\_\_\_  
(Authorized Signing Officer)







## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

E1.1 These Specifications shall apply to the Work.

E1.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.

E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Spec/Default.stm>

E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.

E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.

E1.3 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
W-381-0	Cover Sheet	A1
W-381-1	Seine River Pathway – 1201 St. Anne's Road to Shorehill Drive – 0-240 meter length	A1
W-381-2	Seine River Pathway – 1201 St. Anne's Road to Shorehill Drive – 240-880 meter length	A1
W-381-3	Seine River Pathway – 1201 St. Anne's Road to Shorehill Drive – 880-1125 meter length	A1
W-381-4	Seine River Pathway – 1201 St. Anne's Road to Shorehill Drive – 1125-1395 meter length	A1
W-381-5	Seine River Pathway – 1201 St. Anne's Road to Shorehill Drive – 1395-1860 meter length	A1
W-381-6	Seine River Pathway – 1201 St. Anne's Road to Shorehill Drive – Details	A1
W-381-7	Seine River Pathway – 1201 St. Anne's Road to Shorehill Drive – Connection to St. Anne's Road	A1

#### E2. PROTECTION OF EXISTING TREES

E2.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities:

- (a) All trees along approved pathway alignment will have a protective zone at the dripline of the crown, which will remain free of digging, trenching, grade changes, stock piling of materials and soil compaction, throughout the duration of the Contract. Protective snow fencing around these areas is required.
- (b) Trees within and immediately adjacent to proposed construction areas and those identified to be at risk by the Contract Administrator, will require 25 x 100 x 2400mm wood planks strapped to the tree trunk to completely protect the tree trunk from impact damage during the entire construction period or as agreed upon by the Contract Administrator. (Smaller trees will be similarly protected using proportionally sized wood planks.)
- (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 3m 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 by an arborist certified to practice in the Province of Manitoba. They must be properly trimmed

with sharp tools to prevent crushing or being pulled up by construction equipment. No paint is required. All exposed roots must be mulched until the excavated area is filled with clean earth to avoid exposure to sunlight and desiccation.

- (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) Trees to remain along the approved pathway alignment are to be pruned prior to removals of trees within the alignment to provide a clear 2.4m wide walkway area. Removal of trees is not to begin until approval of pruning by City of Winnipeg.
- (f) 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.

E2.2 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 designate.

E2.3 No separate measurement or payment will be made for the protection of trees.

E2.4 Except as required in clause E2.1(c) and E2.1(e), elm trees shall not be pruned at any time between April 1 and July 31.

E2.5 Auguring under existing trees will be the only acceptable method of underground installations. Any other excavations must be approved by the Forestry Branch.

### **E3. PEDESTRIAN SAFETY AND TRAFFIC MANAGEMENT**

E3.1 During the Contract, pedestrian access shall be maintained at all times on public right of way and on adjacent properties. A clear pathway unobstructed from any materials or equipment must be provided. No pedestrian access is required on the construction site.

E3.2 Vehicle access must be maintained at all times on public right of way and on adjacent properties.

### **E4. STAKES AND MARKS**

E4.1 Further to C6.26(h), the Contractor will mark, to the extent he determines to be necessary, the location, alignment and elevation of the Work by means of stakes or marks, for review and approval by the Contract Administrator. The Contractor shall make the completed Works conform to the lines and marks thus approved and indicated.

E4.2 The Contractor shall notify the Contract Administrator immediately of the disturbance of any such stakes or marks. The cost of correcting any errors arising out of neglect of the Contractor to so notify the Contract Administrator shall be borne entirely by the Contractor, as well as the cost of replacing any disturbed stakes or marks.

E4.3 Before commencing Work, the Contractor shall satisfy himself as to the meaning and correctness of all stakes and marks and no claims shall be entertained by the City on account of any alleged inaccuracies. If any error is suspected in the Drawings, Specifications or the directions of the Contract Administrator, Work shall be discontinued until the errors are rectified, but no claims shall be made on account of any delay occasioned thereby.

E4.4 The Contractor shall determine and provide all dimensions and elevations measured from the stakes or marks

**E5. WATER OBTAINED FROM THE CITY**

- E5.1 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.

**E6. SURFACE RESTORATIONS**

- E6.1 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.

**E7. TEMPORARY RELOCATION OF AFFECTED STRUCTURES**

- E7.1 The Contractor shall temporarily relocate any portable structure such as benches, waste receptacles, picnic benches, etc., which will interfere with the construction of the Work and are not identified as items to be relocated. The Contractor Administrator will identify the temporary locations for the portable structures. Following the completion of the applicable Work the Contractor shall replace the structures to the locations designated by the Contract Administrator. These relocations shall be considered incidental to the associated Works and no separate measurement for payment will be made.

**E8. TRUCK WEIGHT LIMITS**

- E8.1 The City shall not pay for any portion of Material which results in the vehicle exceeding the maximum gross vehicle weight allowed under *The City of Winnipeg Traffic By-Law*, unless such vehicle is operating under special permit.

**E9. ACCESS**

- E9.1 All access is to be on the designated routes through the Site. These routes will be determined at the pre-construction meeting.
- E9.2 Access to the Site as required by the Contractor shall be provided and maintained by the Contractor at his own expense and approved by the Contract Administrator.
- E9.3 Potential access points have been identified on the drawings for information purposes. The Contractor is responsible for obtaining permission from private land owners if required.
- E9.4 The Contractor's operations shall be limited to the minimum area necessary for undertaking the Work and he shall be responsible for all damage resulting from his Work on private property. The Contractor shall take such measures as are necessary to ensure safe and convenient pedestrian ingress and egress in maintained to private properties while he is working near them. Any damage caused by the negligence of the Contractor or his Sub-Contractors to the adjacent Works or properties, shall be promptly repaired by him at his own expense, to the satisfaction of the Contract Administrator.
- E9.5 All necessary precautions shall be exercised by the Contractor so as not to remove, disturb, or damage any existing trees, shrubs, sod, pavements, streets, roads, boulevards, poles, hydrants, water pipes, gas pipes, electrical wires, cables, conduits, sewers or other existing facilities and equipment at the Site of the Work. For all damage incurred in the performance of the Work (either directly or indirectly), the Contractor shall either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to, the Contract Administrator and the cost of which shall be borne entirely by the Contractor.

## **E10. SITE CONDITION**

- E10.1 The Contractor shall examine the Site and make themselves familiar with the existing conditions (both above and below grade) and nature of Work to be done.
- E10.2 Surface and sub-surface conditions shown on the Drawings and included herein are provided for general information and variations there from shall not affect the terms of the Contract.
- E10.3 The Contractor shall set all necessary control lines, benchmarks, survey, elevation stakes and layout in accordance with the individual Site conditions and in consultation with the Contract Administrator.

## **E11. LAYOUT OF WORKS**

- E11.1 The Contractor will Work from layout information provided in the construction drawings and will be responsible to provide a full time experienced survey crew to layout and continuously check the locations and elevations of all components and paving patterns of the Work included in this Contract.
- E11.2 The Contractor must provide all necessary survey equipment in good operating conditions.
- E11.3 The Contractor shall supply all materials (painting, stakes, ribbon, markers, etc) and labour necessary for the accurate location and setting out of the Work.
- E11.4 From time to time the Contract Administrator may have a survey crew on the Site, but they will check the Work done by the Contractor's survey personnel only. The checking of the Work by the Contract Administrator's surveyors will not relieve the Contractor of any responsibility of the correctness of the Work. Should any structure or paving or any part thereof be installed in any location other than that shown on the Drawings, then the error shall be rectified by the Contractor all at his own expense and at the satisfaction of, and in a manner specified by the Contract Administrator.

## **E12. EXPOSING EXISTING UNDERGROUND SERVICES AND UTILITIES**

- E12.1 The exact location and depth of some of the existing underground services and utilities within the project limits are unknown.
- E12.2 Therefore, the Contractor shall supply all labour, equipment and materials required to expose all underground services and/or utilities sufficiently far enough in advance of the proposed Works to permit the Contract Administrator where necessary, to adjust the alignment and grade to avoid existing lines and ducts.
- E12.3 All costs in connection with this item of Work shall be included in the unit price bid for the various bid items.

## **E13. PRODUCT APPROVALS**

- E13.1 The Contractor shall, following award, prepare a complete list of all material to be used on the project and submit the list to the Contract Administrator seventy-two (72) hours prior to start of construction.
- E13.2 The Contractor shall only use material which has been approved by the Contract Administrator. The list shall provide the product, the manufacturer and the supplier.
- E13.3 Other than required to be done by the Contractor under the Work of this Contract, all necessary precautions shall be exercised by the Contractor so as not to remove, disturb, or damage any existing plant material, pavements, streets, roads, boulevard, poles, hydrants, water pipes, gas pipes, electrical wires, cables, conduits, sewers or other existing facilities and equipment at the Site of the Work. For all damage incurred thereto in the performance of the Work, the Contractor shall upon instructions from the Contractor Administrator, either replace or repair

such damage, whichever may be deemed necessary in the opinion of, and acceptable to the Contract Administrator and the costs of which shall be borne entirely by the Contractor.

E13.4 All workmanship and materials furnished and supplied under this Specification are subject to close and systematic inspection and testing by the Contract Administrator. The Contract Administrator reserves the right to reject any materials or Works which are not in accordance with the requirements of the Specifications.

E13.5 The Contractor shall wholly be responsible for the supply, safe storage, and handling of all materials set forth in this specification, and the control of all operations incidental thereto notwithstanding any inspection or approval that may have been previously given.

#### **E14. DAMAGE TO STREETS AND STRUCTURES**

E14.1 The Contractor is to be advised of the following existing Site features to be retained and protected to the City of Winnipeg Standards:

- |             |                             |                 |
|-------------|-----------------------------|-----------------|
| a) trees    | e) light standards          | i) hydro poles  |
| b) curbs    | f) fire hydrants            | j) catch basins |
| c) sidewalk | g) street signs             | k) curb inlets  |
| d) sod      | h) all underground services | l) fences       |

#### **E15. PERMITS, NOTICES, LICENCES, CERTIFICATIONS, LAWS, AND RULES**

E15.1 The Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the Work may be carried out. The Contractor shall submit all plans required by any inspection authority and obtain approval of same before proceeding with the Work, and pay any cost attached to the inspection of such plans.

E15.2 The Site Development Permits (including lot grading and damage deposits) will be obtained and paid for by the City of Winnipeg Planning, Property and Development Department prior to commencement of construction. A copy of this permit will be provided to the Contractor upon award of Contract.

E15.3 The Contractor shall comply with all laws, ordinances, rules, and regulations that would relate to the Works.

#### **E16. MATCHING EXISTING GRADES**

E16.1 Wherever the proposed paving or sod meets existing pathway/pavement, curb edge, or property line, the Contractor shall construct the proposed element to an acceptable grade, as directed by the Contract Administrator, to ensure that proper drainage and accessibility are maintained.

#### **E17. EXCAVATION, REMOVALS, ROUGH GRADING AND SUBGRADE COMPACTION**

E17.1 Further to City of Winnipeg Specification CW 3110 and CW 3170 this section shall cover the excavation, removals, rough grading and subgrade compaction for pathways and associated works.

##### **Description**

E17.2 The Work of this section comprises the furnishing of all labour, equipment and materials required to complete the excavation and related Work including, but not necessarily confined to, the following:

- Removal of unsuitable subgrade and replacement with approved fill material;
- Removal and disposal of existing gravel pathway;
- Removal of existing trees;
- Removal of existing barb wire fence;

- (e) Excavation, removals, disposal, subgrade compaction and rough grading of the existing Site for the construction of limestone pathway to the design requirements as noted on the Drawings, approved on Site by the Contract Administrator, less the appropriate surface finish allowance;
- (f) Stockpile suitable, approved material on Site for reuse (clean topsoil, clean earth fill and gravel fill). Remove and dispose of unsuitable material;
- (g) Earthwork and Grading of the existing Site (cut and fill including compaction of subgrade and fill material) to ensure positive drainage and required slopes for pathways.

E17.3 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work hereinafter specified.

### **Equipment**

E17.4 All equipment shall be of a type approved by the Contract Administrator and shall be kept in good Working order.

### **Construction Methods**

E17.5 The Contractor shall restrict his activities strictly to within the limits of the Works, unless receiving prior written approval from the Contract Administrator.

E17.6 The Contractor shall construct the Site within the limits indicated to the design elevations and gradients noted on the Drawings, less the appropriate surface treatment depths specified and shall excavate, remove and dispose of all unsuitable materials of whatever nature encountered.

E17.7 The Contractor shall construct all sub-grades in accordance with City of Winnipeg Specification CW 3110. Excavation will be performed as per Item 9.1 of City of Winnipeg Specification CW 3110. The Contractor shall remove existing pavement in accordance with 9.2 of City of Winnipeg Specification CW 3110. Unsuitable Excavated material shall be disposed of as per Item 9.3 of City of Winnipeg Specification CW 3110. All surplus material will be disposed of in accordance with Item 9.3 of City of Winnipeg Specification CW 3110. All work is incidental to the unit prices bid for this project.

E17.8 The Contractor shall restrict his activities strictly to within the limits of the Work, unless receiving prior written approval from the Contract Administrator. The Contractor shall take all precautions to prevent damage to traffic structures, pole lines, existing trees, Site services and adjacent property and he shall be liable for any damages occurring in the performance of this Work.

E17.9 The Contractor shall examine the Site and make themselves familiar with the existing conditions and the nature of the Work to be done.

E17.10 Prevent damage to surface or underground utility lines which are to remain. Make good any damage.

E17.11 Contractor to remove existing gravel pathway outside of area of new pathway as indicated on the Drawings. Dispose of material off Site in legal manner. Fill excavated area with clean topsoil and sod.

E17.12 Contractor to remove and dispose of unsuitable subgrade as indicated on the Drawings. The volume removed is to be filled with compacted clean earth fill in areas of sod and compacted granular base in areas of pathway. Supply, placement and compaction of replacement materials is incidental to the unit price for removal of unsuitable subgrade.

E17.13 The Contractor shall remove and dispose of the full length of the existing barbwire fence, as indicated on the Drawings. Removal and disposal of the barbwire fence is incidental to the unit prices bid under this contract. No separate payment will be made.

- E17.14 The Contractor shall remove existing trees within the 2.4 m wide approved pathway alignment through the trees. No removal is to be done until pruning of adjacent trees is approved. Grub out roots to maximum area possible without disturbing roots of existing trees to remain. Fill all holes with clean earth fill to level of pathway subgrade. All tree pruning and tree removal must be completed by a Contractor or subcontractor approved by the Contract Administrator and the City of Winnipeg. All tree pruning and tree removal is incidental to the unit prices bid under this contract. No separate payment will be made.
- E17.15 The Contractor shall excavate to the design grades shown less the appropriate allowance for surface treatment and shall excavate, remove and dispose of all unsuitable materials of whatever nature encountered.
- E17.16 Excavated or graded materials to be approved before use as fill for grading Work. Protect such approved material from contamination. Stockpile in approved locations on Site. Protection and stockpiling are incidental to unit prices bid for limestone pathway.
- E17.17 All foundations shall be removed to full depth to the satisfaction of the Contract Administrator. Fill all holes resulting from removals with compacted clay fill in sodded areas and compacted granular fill in paved areas.
- E17.18 The Contractor shall excavate and topsoil where pathway is in open areas as per City of Winnipeg Specification CW 3170 Section 9.2. Topsoil to be stockpiled on site and used for areas of regrading and sodding. Excess topsoil to be disposed of offsite in a legal manner. Topsoil excavation and removal is incidental to the unit prices bid for limestone pathway. Placement of topsoil is incidental to the unit price bid for sod.
- E17.19 The Contractor shall ensure that upon completion of the removal operations the Site is left in a neat condition free from debris, etc. for approval by the Contract Administrator prior to placing base courses and clean fill.
- E17.20 Except for drainage swales, berms and embankments indicated, the design gradient for all other areas shall be considered to be straight grade between the design elevations shown. Changes in grade at swales, berms, embankments and field shall be gently contoured as directed by the Contract Administrator to provide future ease of grass mowing operation.
- E17.21 The Contractor is advised that there may be useable topsoil and earth fill on Site. All suitable material will be reviewed and approved by the Contract Administrator and then re-used on Site. The re-use of this material on Site may reduce the quantity of imported topsoil and clean earth fill required. The Contractor shall re-use existing Site material prior to delivering new material to Site.
- E17.22 No direct payment will be made for placing and grading of existing fill as all costs for this Work shall be included in the unit prices bid for limestone pathway.
- E17.23 Compaction shall include the use of sheep's foot or other suitable compaction equipment as approved by the Contract Administrator to achieve a minimum compaction of 98% Standard Proctor Density below all paved and play areas, and 95% Standard Proctor Density in all other areas disturbed under this Contract.
- E17.24 Excavation for all items of new construction is incidental to the unit prices bid under this contract. No separate payment will be made.
- E17.25 The Contractor shall load and haul all removed material from the Site and dispose of these materials legally at a dump located by the Contractor and approved by the Contract Administrator. Any materials dropped or spilled on any streets during the hauling operations shall be promptly cleaned up at the expense of the Contractor, to the satisfaction of the Contract Administrator.
- E17.26 The Contractor shall ensure that upon completion of the removal operations, the Site shall be left free of any hazardous depressions and in a neat condition.



E17.27 The Contractor shall dispose of all unsuitable and excess materials in accordance with City of Winnipeg Specifications. Disposal is incidental to the unit prices bid.

### **Measurement and Payment**

E17.28 Removal of limestone pathway will be measured and paid for at the contract unit price per square meter for "Remove and dispose of limestone pathway" as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification. The total number of metres to be paid for shall be the total number removed in accordance with this Specification as computed from measurements made by the Contract Administrator.

E17.29 Removal of unsuitable subgrade will be measured and paid for at the contract cubic metre price for "Remove unsuitable subgrade" as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification. The total number of metres to be paid for shall be the total number removed in accordance with this Specification as computed from measurements made by the Contract Administrator.

E17.30 Removals, grading and compaction for all pathway work will be incidental to the unit prices bid for each type of pathway. No separate measurement or payment will be made.

## **E18. HDPE CULVERT**

### **Description**

E18.1 This section shall cover the supply and installation of HDPE culverts and flap gates.

### **Materials**

E18.2 Pipe to be either 200 mm or 600 mm inside diameter HDPE pipe, as directed by the Contract Administrator.

E18.3 Bar to be 15 mm diameter smooth galvanized steel bar with threading for top 75 mm with two galvanized nuts and washers.

E18.4 Flap gate for 200 mm HDPE culverts to be Canada Culvert FG08P, or approved equal. Flap gate for 600 mm HDPE culverts to be Canada Culvert 600FGG300, or approved equal.

E18.5 Geotextile as per limestone pathway section.

E18.6 Granular base as per limestone pathway section.

E18.7 Rock rip rap to City of Winnipeg Specification CW3615.

E18.8 Grout to City of Winnipeg Specification CW3615.

### **Construction Method**

E18.9 Excavate subgrade as required for installation of granular levelling course. Ensure slope and invert elevation of culvert is consistent with swale grades.

E18.10 Supply and place 50 mm depth granular base material to provide bed for pipe with grade following existing slope of swale.

E18.11 Set culvert on levelling course and backfill around culvert with compacted base material in 150 mm lifts.

E18.12 Connect subdrain from pathway where required.

E18.13 Install galvanized bar in both ends of pipe to reduce entrance size. Fix in place with washers and nuts as per the Drawings.

E18.14 Install flap gate as per manufacturer's specifications.

E18.15 Following installation of pathway, install rock as per Drawings. Grout rock in place adjacent to pathway. No separate measurement or payment will be made for rock and grout.

### Measurement and Payment

E18.16 HDPE culverts will be measured and paid for at the contract unit price for "Supply and install 200 mm culvert" or "Supply and install 600 mm culvert" per type as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification. The total number to be paid for shall be the total number installed in accordance with this Specification as computed from measurements made by the Contract Administrator.

## E19. CRUSHED LIMESTONE PATHWAY

### Description

E19.1 Further to City of Winnipeg Specification CW 3110 and City of Winnipeg Specification CW 3130, the Work of this section comprises the furnishing of all labour, equipment and materials incidental and required to complete the construction of limestone pathway as shown on the drawings and as hereinafter specified including, but not necessarily confined to, the following:

- (a) Supply and installation of separation/reinforcement geotextile.
- (b) Supply and installation of drainage tile and Multi-Flow drain.
- (c) Supply, placement and compaction of granular subbase.
- (d) Supply, placement and compaction of granular base.
- (e) Supply, placement and compaction of limestone fines.
- (f) Supply and placement of local grade wood chip mulch.
- (g) Supply and installation of snap edge

E19.2 All work and materials herein described is incidental to the unit prices bid for limestone pathway.

### Materials

E19.3 The materials used in construction of the crushed limestone pathway shall meet the following requirements:

- (a) Multi-Flow drain to be 6" drain with 6" Horizontal Corru-Tap and rigid pvc extension with drain cap.
- (b) Drain tile to be 100mm diameter perforated pipe with sock as per the Drawings.
- (c) Geotextile as per City of Winnipeg Specification CW 3130.
- (d) All Materials supplied under this Specification shall be of a type approved by the Contract Administrator and shall be subject to inspection and testing by the Contract Administrator;
- (e) Crushed limestone consisting of hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials.
- (f) Granular levelling course - gradations to be within limits specified below when tested to ASTM C136-83 and have a smooth curve without sharp breaks when plotted on semi-log grading chart;

<u>ASTM Sieve Designation</u>	<u>% Passing</u>
20mm (3/4")	100
12.5mm (1/2")	50-75
9.5mm	30-50
6.0mm	10-20
0.425	0-5

0.18	nil
0.075	nil

- (g) Crushed limestone fines –1/4” (6mm) down.
- (h) Wood chip mulch to locally sourced free of twigs, branches and leaves.
- (i) Snapedge to be commercial grade Snapedge product with all required fasteners.

### Construction

E19.4 There are three types of pathways to be constructed as shown on the Drawings. The Contractor is to follow the general pathway construction requirements for all types and modify construction as indicated for specific pathway types.

E19.5 No construction is to be done until subgrade is inspected and approved by the Contract Administrator.

E19.6 General pathway construction requirements:

- (a) Subgrade is to be shaped to ensure positive drainage to river. Where pathway finish grade is flush to grade ensure subgrade is sloped to river or drain tile at minimum 2%.
- (b) Compact subgrade to min. 98% standard proctor density.
- (c) Add crushed granular material as required to replace unsuitable subgrade material. Place in layers not exceeding 150mm thickness and compact to 98% standard proctor.
- (d) Supply and place geotextile over subgrade. For pathways with rock geotextile is to be placed adjacent to rock face. For pathways with excavation geotextile is to be continuous up sides of excavation.
- (e) Place Multi-Flow drain or drain tile as per the Drawings. Connect drain tile to HDPE culverts. All joints to be caulked with silicon sealant.
- (f) Install horizontal Corru-Tap with pvc extension and drain cap as per the Drawings.
- (g) Supply, place and compact subbase material for at grade pathway to depth as shown on the Drawings. Compact to 100% standard proctor density.
- (h) Supply, place and compact crushed granular base course material to depth as shown on the Drawings for each type of pathway. Compact to 100% standard proctor density.
- (i) Place crushed granular levelling course material to a minimum compacted thickness as shown on the drawings. Compact to 100% standard proctor density.
- (j) Crushed Limestone fines to a minimum compacted thickness of 15mm as finishing course. Compact to 98% standard proctor density.
- (k) Add rock as per the Drawings for areas of pathway prone to flooding. Extent of rock to be reviewed and approved on site by Contract Administrator.
- (l) Wood chip mulch to be placed at a minimum depth of 50mm along edges of limestone pathway as shown on the Drawings.
- (m) Snapedge to be installed on curves of pathway adjacent to sidewalk and planting beds as shown on the Drawings.

### Acceptance

E19.7 Any Work not satisfactory as specified herein and as determined by the Contract Administrator for initial testing, shall be rectified by the Contractor. This process of inspection and correction shall continue until the Contract Administrator is satisfied that the Work is 100% complete and as per the construction drawings and specifications. All additional tests for failed or unacceptable results will be borne solely by the Contractor.

## Measurement and Payment

E19.8 Crushed limestone pathway will be measured and paid for at the contract unit price per square meter for "Supply and install limestone pathway" by type as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification. The total number of square metres to be paid for shall be the total number installed in accordance with this Specification as computed from measurements made by the Contract Administrator.

## E20. LANDSCAPE ROCKS

### Description

E20.1 This section comprises the supply and installation of landscape rock.

### Materials

E20.2 Landscape rock to be mixed rock types 200 – 300 mm high by minimum 500 mm long.

E20.3 Geotextile to be Geotex 601 by Propex or approved equal.

E20.4 Granular Base Course – 20 mm down crushed limestone

### Construction Methods

E20.5 Landscape rock along the downhill side of pathway and at culverts to be installed as per the Drawings.

### Acceptance

E20.6 All rock is to be placed and all finish surfaces repaired prior to inspection.

### Measurement and Payment

E20.7 No separate measurement or payment will be made for rocks at culverts or along pathway.

## E21. PLANT MATERIAL

### Description

E21.1 The following list generally describes the scope of this section:

- (a) Supply and installation of deciduous trees, including preparation, digging, transport, and planting to current City of Winnipeg tree planting standards.
- (b) Maintenance to Total Performance.
- (c) Warranty for two (2) full years from date of Total Performance.

### General

E21.2 Obtain approval of plant material at source.

E21.3 Notify Contract Administrator of source of material at least seven (7) days in advance of shipment. No Work under this Special Provision is to proceed without approval.

E21.4 Acceptance of plant material at source does not prevent rejection at Site prior to or after planting operations.

E21.5 Source of all plant material to be from an area within the same hardiness zone and soil conditions as Winnipeg.

- E21.6 Co-ordinate shipping of plants and excavation of holes to ensure minimum time lapse between digging and planting. Tie branches of trees securely and protect plant material against abrasion, exposure and extreme temperature change during transit. Avoid binding of planting stock with rope or wire which would damage bark, break branches or destroy natural shape of plant. Give full support to root ball of large trees during lifting.
- E21.7 Cover plant foliage with tarpaulin, and protect bare roots by means of dampened straw, peatmoss, sawdust or other acceptable material to prevent loss of moisture during transit and storage.
- E21.8 Remove broken and damaged roots with sharp pruning shears. Make clean cut and cover cuts over 50 mm diameter with wound dressing.
- E21.9 Keep roots moist and protected from sun and wind.
- E21.10 All tree planting must be completed by a Contractor or subcontractor approved by the Contract Administrator and the City of Winnipeg.

### **Materials**

- E21.11 Water should be potable and free of minerals, which may be detrimental to plant growth.
- E21.12 Quality and Source: Comply with Guide Specification for Nursery Stock, 1982 Edition of Canadian Nursery Trades Association, referring to size and development of plant material and root ball. All plant material to be approved by the Contract Administrator.
- E21.13 Measure plants when branches are in their natural position. Height and spread dimensions refer to main body of plant and not from branch tip to branch tip. Use trees and shrubs of No. 1 grade.
- E21.14 Use shrubs with strong fibrous root system free of disease, insects, defects or injuries and structurally sound. Plant must have been root pruned regularly, but not later than one growing season prior to arrival on Site.
- E21.15 Approval required for plant material, which has been held in cold storage.
- E21.16 Deciduous trees in excess of 3 m height must have been dug with large firm ball. Root balls must include 75% of fibrous and feeder root system. This excludes use of native trees grown in light sandy or rocky soil. Secure root balls with burlap, heavy twine and wire basket. Protect root balls against sudden changes in temperature and exposure to heavy rainfall.
- E21.17 No tree spade dug material will be accepted.
- E21.18 Lift root ball from hole, place in wire basket designed for purpose and line with burlap. Replace root ball and tie basket to ball with heavy rope. Take care not to injure trunk of tree with wire basket ties or rope.
- E21.19 Trees that have been grown or exported from areas that are infected with ash borer will not be accepted. This includes southern Ontario and the north eastern United States.

### **Construction Methods**

- E21.20 Stake out location of tree and shrubs as per the Construction Drawings. Obtain approval by the Contract Administrator prior to excavating.
- E21.21 Co-ordinate operations. Keep Site clean and planting holes drained. Immediately remove soil or debris spilled onto pavement.
- E21.22 When permission has been obtained to plant materials after buds have broken, spray plants with anti-desiccant to slow down transpiration prior to transplanting.
- E21.23 Plant only under conditions that are conducive to health and physical conditions of plants.

- E21.24 Provide planting schedule. Executing planting operations over long period using limited crew will not be accepted.
- E21.25 Prepare Tree Pits to City of Winnipeg and Canadian Nursery Trades Association standards.
- E21.26 Provide drainage for planting holes in heavy soil if natural drainage does not exist. Have method approved.
- E21.27 Protect bottom of excavations against freezing.
- E21.28 Remove water, which enters excavations prior to planting. Ensure source of water is not ground water.
- E21.29 Loosen bottom of planting hole to depth of 150 to 200 mm. Cover bottom of each excavation with minimum of 150 mm of topsoil mixture.
- E21.30 Plant trees vertically with roots placed straight out in hole. Orient plant material to give best appearance in relation to structure, roads and walks.
- E21.31 Place plant material to depth equal to depth they were originally growing in nursery.
- E21.32 With balled and burlapped root balls, loosen burlap and cut away minimum top 1/2 without disturbing root ball. Cut vertical slits in remaining burlap around root ball at 250 mm intervals. Remove all rope, string, or other ties from around trunk. Do not pull burlap or rope from under root ball. With container stock, remove entire container without disturbing root ball. Non bio-degradable wrappings must be removed including wire baskets.
- E21.33 Tamp planting soil around root system in layers of 150 mm, eliminating air voids. Frozen or saturated planting soil is unacceptable. When 2/3 of planting soil has been placed, fill hole with water. After water has completely penetrated into soil, complete backfilling.
- E21.34 Build 100 mm deep saucer around outer edge of hole to assist with maintenance watering. Install 100 mm depth wood chip mulch in saucer as shown on drawings.
- E21.35 When planting is completed, give surface of planting saucer dressing of organic 10-15-10 fertilizer at rate of 12 kg/100 m for shrub beds or 40 to 50 g/mm of calliper for trees. Mix fertilizer thoroughly with top layer of planting soil and water in well.
- E21.36 Prune trees after planting only as required to remove broken diseased or dead branches. Employ clean sharp tools and make cuts flush with main branch, smooth and sloping as to prevent accumulation of water.

### **Maintenance**

- E21.37 After completion of planting operation to the satisfaction of the Contract Administrator, the Contractor shall be responsible for the maintenance of the plant material until date of Total Performance.
- E21.38 Replace any dead or damaged plant material during the maintenance period, including replacement of vandalized material.
- E21.39 Water sufficiently to maintain optimum growing conditions. Ensure adequate moisture in root zone at freeze-up.
- E21.40 The Contractor shall provide all necessary equipment, including: tractors, mowers, hand mowers, trimmers, fertilizer spreaders, pruning tools, hoses, water meters, and any other items necessary for the maintenance of the plant material indicated in this Specification.
- E21.41 The Contractor shall provide all necessary personnel for the ongoing maintenance operations.

E21.42 Personnel should have at least one year of experience in landscape maintenance and should be under the direction of a foreman, in all cases, with not less than five years of experience with similar maintenance operations.

### **Maintenance Methods**

E21.43 Trees shall be watered bi-weekly, or during the summer, if temperatures are fairly high and there has been no rainfall, water approximately once a week.

E21.44 To determine the need for watering, make a soil test weekly with a one-inch auger. Take a test sample from both the planting soil and from the root ball by drilling to a minimum depth of 600 mm. The soil shall contain enough moisture to hold together when compressed in the hand, but not be muddy.

E21.45 Because of the specialized nature of such operations, fertilizing is to be done by a qualified local arborist.

E21.46 Fertilize in the fall over the surface of the ground surrounding the plants, then soak the area thoroughly, use appropriate analysis fertilizer for autumn planting and spread to a maximum of 0.13 kg per square metre.

### **Measurement and Payment**

E21.47 Supply and installation of deciduous trees will be measured on a unit basis. The number of units to be paid shall be the total number of each type and size of units supplied and installed in accordance with the Drawings and Specifications and as measured and accepted by the Contract Administrator. Supply and installation of deciduous trees will be paid for at the Contract Unit Price per unit type and size specified for "Supply and install deciduous trees", measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.

## **E22. EXTENDED MAINTENANCE**

### **Description**

E22.1.1 This Specification shall deal with the maintenance of the Plant Material.

### **Materials and Personnel**

E22.2 The Contractor shall provide all necessary equipment, including: tractors, trimmers, fertilizer spreaders, pruning tools, water trucks, hoses, water meters, and any other items necessary for the maintenance of the area indicated in this Specification.

E22.3 The Contractor shall provide all necessary personnel for the ongoing maintenance operations.

### **Work Included**

E22.4 The following areas shall be part of the maintenance jurisdiction:

- (a) The tree area as indicated on the Construction Drawings

### **Maintenance of Plant Material**

E22.5 All trees shall be watered bi-weekly, or during the summer, if temperatures are fairly high and there has been no rainfall, water approximately once a week. Where irrigation is not available this should be executed by leaving a hose, with a gentle rate of flow, running into the saucer of the root ball for about one hour.

E22.6 To determine the need for watering, make a soil test weekly with a one-inch auger. Take a test sample from both the planting soil and from the root ball by drilling to a minimum depth of 600 mm. The soil shall contain enough moisture to hold together when compressed in the hand, but shall not be muddy.

- E22.7 Fertilizing, Pruning and Spraying Deciduous Trees. Because of the specialized nature of such operations, this should be done by a qualified local arborist.
- E22.8 Fertilize in the fall over the surface of the ground surrounding the plants, and then soak the area thoroughly. Use 10-6-4 analysis fertilizer spreading a maximum of 0.13kg per square meter.
- E22.9 Spray trees to control insect pests and diseases. Use horticulturally recommended compounds specific for the problem to be contained.
- E22.10 Supply and install protective tree wrap on ornamental deciduous tree trunks to prevent winter scalding. Remove tree wrap in spring.
- E22.11 Tighten, or remove, turnbuckles or guy wires for trees as required or directed by the Contract Administrator.
- E22.12 Straighten trees as required and directed by the Contract Administrator.
- E22.13 The Contractor shall agree and guarantee to replace and replant any nursery stock found dead or in poor condition at the completion of the maintenance period. "Poor Condition" shall be interpreted as meaning nursery stock in which branches are dead or dying, or have not shown satisfactory growth of leaves. All replacements shall be of same size and species, as specified.
- E22.14 Upon the end of the required maintenance period, a Site inspection shall be held. If at this time, all material and Works is satisfactory the Contract for maintenance and warranty shall be terminated.

### **Measurement and Payment**

- E22.15 Extended Maintenance will be measured on a lump sum basis and paid for in accordance with this Specification and accepted by the Contract Administrator. Extended Maintenance will be paid for over two (2) years, at 50% of the Contract Lump Sum Price each year for "2 year extended maintenance"; which price shall be payment in full for supply of all materials and performing all operations herein described and for all other items incidental to the Work included in this Specification.

### **E23. SIGN ON WOOD POST**

#### **Description**

- E23.1 This specification covers the supply and installation of 'No Trespassing, Private Property' sign on wood post.

#### **Materials**

- E23.2 Post to be fabricated from 150x150mm pressure treated wood posts. Length as shown on the drawings.
- E23.3 12" x 18" 'No Trespassing, Private Property' sign to be aluminium plate with painted graphic and two pre punched holes for mounting. Provide sign graphic proof for review and approval.
- E23.4 Sign bolted to post with stainless steel lag bolts, nuts and washers.
- E23.5 Granular base to City of Winnipeg standards.

#### **Delivery and Storage**

- E23.6 Store unit in a protected location, immediately upon arrival on the Site.
- E23.7 Remove from Site any units which have been damaged during transportation and replace.



### **Installation**

- E23.8 To install sign and post at terminal node, drill 300mm diameter hole for post.
- E23.9 Set post plumb in centre of hole and backfill with granular base.
- E23.10 Granular base to be compacted every in 150mm layers.
- E23.11 Drill holes in post for mounting hardware.
- E23.12 Sign to be mounted on post with lay bolts. Bolts to be counter sunk on back side of post.

### **Measurement and Payment**

- E23.13 Sign on wood post will be paid for at the Contract Unit Price for each item, which price shall be payment in full for supply of all materials and performing all operations herein described and for all other items incidental to the Work included in this Specification.