



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 325-2006**

**KING'S PARK – WATERFALL RESTORATION AND RENOVATION**

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## **PART B - BIDDING PROCEDURES**

### **B1. PROJECT TITLE**

B1.1 KING'S PARK – WATERFALL RESTORATION AND RENOVATION

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, June 27,2006.

B2.2 Bid Submissions determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. SITE INVESTIGATION**

B3.1 Further to GC:3.1, the Contract Administrator or an authorized representative will be available at the Site from 1:00 pm to 2:00 pm Winnipeg time on June 20, 2006 to provide Bidders access to the existing pump house.

B3.2 The Bidder is advised that, due to the nature of the Work, the existing conditions and extent of Work should be reviewed on Site prior to bidding.

B3.3 The Bidder shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

### **B4. ENQUIRIES**

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

B4.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.

B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

### **B5. ADDENDA**

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

B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet site for addenda shortly before submitting his Bid.

B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B6. SUBSTITUTES**

B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.

B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.

B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:

- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
- (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
- (c) identify any anticipated cost or time savings that may be associated with the substitute;
- (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
- (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.

B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.

B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.

B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.

- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative shall 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 B15.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

## **B7. BID SUBMISSION**

- B7.1 The Bid Submission consists of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices.
- B7.2 All components of the Bid Submission 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 in ink, to constitute a responsive Bid.
- B7.3 The Bid Submission shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.3.1 Samples or other components of the Bid Submission 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 Submission.
- B7.4 Bid Submissions submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.5 Bid Submissions shall be submitted to:
- The City of Winnipeg  
Corporate Finance Department  
Materials Management Branch  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1

## **B8. BID**

- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his 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.

- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 12 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
  - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
  - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
  - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid shall be printed below such signatures.
- B8.4.2 All signatures shall be original and shall be witnessed except where a corporate seal has been affixed.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid Submission and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 Notwithstanding GC.12.2.3(c), prices on Form B: Prices shall include the Manitoba Retail Sales Tax (MRST, also known as PST), except for Item 1, the Waterfall Pump System, for which MRST shall be extra.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

## **B10. QUALIFICATION**

- B10.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba;
  - (b) be responsible and not be suspended, debarred or in default of any obligation to the City;
  - (c) be financially capable of carrying out the terms of the Contract;
  - (d) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract;

- (e) have successfully carried out work, similar in nature, scope and value to the Work;
- (f) employ only Subcontractors who:
  - (i) are responsible and not suspended, debarred or in default of any obligation 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 Branch internet site at <http://www.winnipeg.ca/matmgt>); and
  - (ii) have successfully carried out work similar in nature, scope and value to the portion of the Work proposed to be subcontracted to them, and are fully capable of performing the Work required to be done in accordance with the terms of the Contract;
- (g) have a written workplace safety and health program in accordance with The Workplace Safety and Health Act (Manitoba).

B10.2 The Bidder shall be prepared to submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B10.3 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

## **B11. BID SECURITY**

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

- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
- (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
- (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.

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

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

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

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

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



## **B12. OPENING OF BIDS AND RELEASE OF INFORMATION**

- B12.1 Bid Submissions will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Branch, or in such other office as may be designated by the Manager of Materials.
- B12.1.1 Bidders or their representatives may attend.
- B12.1.2 Bid Submissions determined by the Manager of Materials, or his designate, to not include the bid security specified in B11 will not be read out.
- B12.2 After the public opening, the names of the Bidders and their Total Bid Prices as read out (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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- B12.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- B12.4 The Bidder is advised that any information contained in any Bid Submission may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

## **B13. IRREVOCABLE BID**

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

## **B14. WITHDRAWAL OF BIDS**

- B14.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B14.1.1 Notwithstanding GC:23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B14.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials shall:
- (a) retain the Bid Submission until after the Submission Deadline has elapsed;
  - (b) open the Bid Submission to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
  - (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.

B14.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B13.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

## **B15. EVALUATION OF BIDS**

B15.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Bid Opportunity (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B6.

B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid Submission 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 if the interests of the City so require.

B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid Submission or in other information required to be submitted, that he is responsible and qualified.

B15.4 Further to B15.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices and will be adjusted, if necessary, as follows:

- (a) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price or;
- (b) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budgetary provision for the Work, the Total Bid Price of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by progressively deducting the following items in the order listed until a Total Bid Price within the budgetary provision is achieved:
  - (i) Item 12 - Plant Material – Group III,
  - (ii) Items 11 - Plant Material – Group II,
  - (iii) Items 10 - Plant Material – Group I,
  - (iv) Item 13 - Benches.

B15.5 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.

## **B16. AWARD OF CONTRACT**

B16.1 The City will give notice of the award of the Contract by way of a letter of intent, or will give notice that no award will be made.

B16.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.

- B16.2.1 Without limiting the generality of B16.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
  - (b) the prices are materially in excess of the prices received for similar work in the past;
  - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
  - (d) only one Bid is received; or
  - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B16.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid.

## **PART C - GENERAL CONDITIONS**

### **C1. GENERAL CONDITIONS**

C1.1 The *General Conditions for Construction Contracts* (Revision 2000 11 09) are applicable to the Work of the Contract.

C1.1.1 The *General Conditions for Construction Contracts* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

## **PART D - SUPPLEMENTAL CONDITIONS**

### **GENERAL**

#### **D1. GENERAL CONDITIONS**

- D1.1 In addition to the *General Conditions for Construction Contracts*, these Supplemental Conditions are applicable to the Work of the Contract.
- D1.2 The General Conditions are amended by striking out "The City of Winnipeg Act" wherever it appears in the General Conditions and substituting "The City of Winnipeg Charter".
- D1.3 The General Conditions are amended by striking out "Tender Package" wherever it appears in the General Conditions and substituting "Bid Opportunity".
- D1.4 The General Conditions are amended by striking out "Tender Submission" wherever it appears in the General Conditions and substituting "Bid Submission".
- D1.5 The General Conditions are amended by deleting GC:6.16 and GC:6.17. The City of Winnipeg is now within the jurisdiction of the Manitoba Ombudsman pursuant to The Ombudsman Act.

#### **D2. SCOPE OF WORK**

- D2.1 The Work to be done under the Contract shall consist of the restoration and renovation of the waterfall and associated gardens at King's Park.
- D2.2 The major components of the Work are as follows:
- (a) Supply and installation of a waterfall pump system including all mechanical and electrical.
  - (b) Restoration of waterfall basins and rock walls.
  - (c) Renovation of pathways, rock garden walls, and planting beds.
  - (d) Benches

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

- D3.1 The Contract Administrator is David Wagner Associates Inc., represented by:
- David Wagner  
Landscape Architect  
4-430 River Avenue  
Winnipeg, Manitoba  
R3L 0C6
- Telephone No. (204) 452-2426  
E-Mail dwagner@dwla.ca
- D3.2 At the pre-construction meeting, David Wagner 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.

## **D5. NOTICES**

- D5.1 Except as provided for in GC:23.2.2, 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 identified in D3.1.
- D5.3 All notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following address or facsimile number:
- The City of Winnipeg  
Chief Administrative Officer Secretariat  
Administration Building, 3rd Floor  
510 Main Street  
Winnipeg MB R3B 1B9  
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  
Corporate Services Department  
Legal Services Division  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

## **SUBMISSIONS**

### **D6. INSURANCE**

- D6.1 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) all inclusive, with The City of Winnipeg and David Wagner Associates Inc being added as an additional insured, with a cross-liability clause, such liability policy to also contain a contractual liability, an unlicensed motor vehicle liability and a products and completed operations endorsement to remain in place at all times during the performance of the Work and throughout the warranty period;
  - (b) automobile liability insurance for owned and non-owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- D6.2 Deductibles shall be borne by the Contractor.
- D6.3 The Contractor shall provide the City Solicitor 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 but in no event later than the date specified in GC:4.1 for the return of the executed Contract.

D6.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

#### **D7. PERFORMANCE SECURITY**

D7.1 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.

D7.1.1 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.

D7.2 If the bid security provided in his Bid Submission was not a certified cheque or draft pursuant to B11.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in GC:4.1 for the return of the executed Contract.

#### **D8. SUBCONTRACTOR LIST**

D8.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the General Conditions for the return of the executed Contract.

### **SCHEDULE OF WORK**

#### **D9. COMMENCEMENT**

D9.1 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.

D9.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
  - (i) evidence that the Contractor is 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;
  - (ii) evidence of the workers compensation coverage specified in GC:6.14;
  - (iii) evidence of the insurance specified in D6;
  - (iv) the performance security specified in D7; and,
  - (v) the Subcontractor list specified in D8.

- (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.

**D10. SUBSTANTIAL PERFORMANCE**

- D10.1 The Contractor shall achieve Substantial Performance by September 22, 2006.
- D10.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D10.3 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.

**D11. TOTAL PERFORMANCE**

- D11.1 The Contractor shall achieve Total Performance by October 6, 2006.
- D11.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D11.3 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.

**D12. LIQUIDATED DAMAGES**

- D12.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City one thousand dollars (\$1000) per Calendar Day for each and every Calendar Day following the day fixed herein for Total Performance during which such failure continues.
- D12.2 The amount specified for liquidated damages in D12.1 is based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Total Performance by the day fixed herein for same.
- D12.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

**D13. SCHEDULED MAINTENANCE**

- D13.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
  - (a) Plant Material as specified in E17.
- D13.2 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**

### **D14. JOB MEETINGS**

- D14.1 Job meetings will be held at the Site as required. 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.
- D14.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

### **D15. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

- D15.1 Further to GC:6.26, 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).

**FORM H1: PERFORMANCE BOND**  
(See D7)

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 dated the

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, for:

BID OPPORTUNITY NO. 325-2006

KING'S PARK – WATERFALL RESTORATION AND RENOVATION

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)

\_\_\_\_\_  
(Name of Principal)

Per: \_\_\_\_\_ (Seal)

Per: \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

By: \_\_\_\_\_ (Seal)  
(Attorney-in-Fact)

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT  
(PERFORMANCE SECURITY)**  
(See D7)

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

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 325-2006  
KING'S PARK – WATERFALL RESTORATION AND RENOVATION

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, STANDARD DETAILS AND DRAWINGS

- E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.1.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- E1.1.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.1.3 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.

E1.2 The following Drawings are applicable to the Work:

The original design drawings for the King's Park Waterfall, 1981-3, have been included for reference purposes:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
K.4-AA	King's Park Waterfall – Grading and Landscape Structures
K.4-AC	King's Park Rock Garden
K.4-Y1	King's Park Waterfall and Related Works – Waterfall Site Plan
K.4-Y2	King's Park Waterfall and Related Works – Waterfall Pump System

King's Park Waterfall Restoration and Renovation, 2006:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
L1	Existing Conditions Plan
L2	Waterfall Restoration
L3	Pathway and Rock Step Renovation
L4	Rock Garden Renovation

### SITE WORK

#### E2. SITE ACCESS

- E2.1 Access to the Site will be determined at the pre-construction meeting. This access area shall be maintained and restored by the Contractor at his own expense and approved by the Contract Administrator.
- E2.2 The Contractor shall be restricted to the Site access location and route only so that there is a minimum of disturbance to the existing ground surface. Damage to areas beyond the marked route shall be repaired by and at the expense of the Contractor to the satisfaction of the Contract Administrator.

#### E3. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES

- E3.1 Further to GC: 6.12, 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.
- E3.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.

- E3.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.
- E3.4 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Act.
- E3.5 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Fall Protection guidelines.
- E3.6 The Contractor and Sub-contractors must be fully aware of all Work involving hazardous materials. All Work must be performed in compliance with the Manitoba Department of Labour Workplace Health and Safety Guidelines and all other applicable codes. The Contractor is responsible for the immediate notification to the Contract Administrator of his/her encountering of suspected hazardous material during their course of Work.

#### **E4. DAMAGE TO EXISTING STRUCTURES AND PROPERTY AND SERVICES AND UTILITIES**

- E4.1 Further to GC: 17, 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 thereto in the performance of the Work, the Contractor shall upon instructions from and to the satisfaction of the Contract Administrator, either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to, the Contract Administrator. The cost of which shall be borne entirely by the Contractor.
- E4.2 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 is maintained to private properties while he is working near them. Any damage caused by the negligence of the Contractor or his Subcontractors to the adjacent Works or properties, shall be promptly repaired by him at his own expense, to the satisfaction of the Contract administrator.
- E4.3 Existing Services and Utilities
- No responsibility will be assumed by the City for correctness or completeness of the Drawings, when provided, with respect to the existing utilities, pipes or other objects either underground or on the surface; the City shall not be liable for the incorrectness and inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of all such utilities, pipes and other objects and to make good any damage done to them.

#### **E5. PROTECTION OF EXISTING TREES**

- E5.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing trees within the limits of the construction area:
- (a) Trees greater than 100 mm diameter or trees identified to be at risk by the Contract Administrator are to be strapped with 25x100x2440 mm wood planks, or other suitable protection as approved by the Contract Administrator. Do not use nails or other fasteners that penetrate the tree trunk. The width and length of strapping may be reduced to suit the tree being protected as approved by the Contract Administrator.
  - (b) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches) where 1 inch diameter equals 1 foot measured from the outside edge of the trunk of the tree at 6 inches above grade. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.



- (c) Equipment shall not be operated within the drip line without written permission from the Contract Administrator. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the drip lines of trees. The drip line of a tree shall be considered to be the entire ground surface located directly beneath the tree and radiating out to 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.
- (d) Repair, replace and maintain tree protection materials during construction until the Project completion.
- (e) Carefully remove safety fencing and strapping material without harming the trees as soon as the construction and restoration Work is complete.

- E5.2 Obtain approval from the Contract Administrator to excavate within 2.0 M of a tree.
- E5.3 Excavate in a manner to minimize damage to the tree root systems. Keep exposed roots in excavations and trenches moist or shaded. If stockpiling of excavated soil material is required, stockpile in areas away from the tree roots if possible.
- E5.4 Prune exposed roots with equipment such as trencher, chain saws, root cutters or other methods acceptable to the Contract Administrator in a manner that will leave a neat, clean root end.
- E5.5 Take precautions to ensure tree limbs overhanging the Work area are not damaged by construction equipment. Contact the Forestry Branch for consultation or pruning of overhanging or damaged limbs and branches and other unanticipated problems with trees during the construction of the Works.
- E5.6 The City of Winnipeg Naturalist Branch, also has authority for Natural stands of forested/brush/native grass areas, and may also instruct the Contractor on protective measures to protect the riverbank vegetation.
- E5.7 Further to the Naturalist requirements the Contractor must set up a temporary orange safety fence to define the agreed upon Work area to ensure that additional damage does not occur to adjacent vegetation. Damage to vegetation and established trees beyond the defined Work will result in additional charges based on the Forestry Branch assessment of the tree valuation.
- E5.8 All damage or pruning required to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the Forestry Branch. Damages must be repaired by an Individual with a Manitoba Arborist Licence or by the Forestry Branch.
- E5.9 Protection of existing trees, repair of trees and pruning of damaged limbs will not be measured for payment and is to be included with the Underground or Surface Works. Removal and replacement of existing trees by the Forestry Branch deemed to have died or that are dying due to damage from carelessness during construction, will be at the Contractor's cost. The Contractor will be invoiced for the cost, or have the cost deducted from any payments owing.

## **E6. TEMPORARY UTILITIES**

- E6.1 Further to GC: 6.12, the Contractor shall make his own arrangements in connection with the temporary use of lighting, power, gas, sewer, water or other utilities, and pay all costs in connection therewith.
- E6.2 All necessary permits, fees and other like expenses as well as the cost of temporary connections to existing facilities shall be arranged and paid for by the Contractor.

## **E7. SITE ENCLOSURES**

- E7.1 Temporary Site enclosures, as determined necessary at the pre-construction meeting, shall be erected and maintained as required for the duration of the construction period.
- E7.2 Site enclosures shall be considered incidental to the Contract Work.

## **E8. DOCUMENTS**

- E8.1 The Contractor must have a complete set of specifications and full size drawings on Site at all times during the construction period.

## **E9. LAYOUT**

- E9.1 The Contractor is responsible for the layout of all Work.
- E9.2 The Contract Administrator shall be advised of the staking of the layout at least twenty-four (24) hours in advance in order that the layout may be inspected and adjusted as required prior to construction.
- E9.3 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 of Winnipeg or the Contract Administrator on account of alleged inaccuracies. If any error is suspected in the plans, specifications, or the directions of the Contract Administrator, Work shall be discontinued until the errors are rectified through consultation with the Contract Administrator. No claims shall be made on account of any delay occasioned thereby.

## **SPECIFICATIONS**

### **E10. WATERFALL PUMP SYSTEM**

- E10.1 General Description
- (a) This specification shall cover the supply and installation of a complete working water pump system for the waterfall.
- E10.2 Existing Waterfall System
- (a) There is an existing pump house and waterfall system in place. Renovations to those parts of the existing system, that are to be incorporated into the new working system, are to be considered incidental to this Work.
  - (b) Original design drawings for the existing system have been included for reference purposes. Refer to E4.3.
  - (c) The existing water lines from the waterfall to the pump house and from the pump house to the riverbank may be used in the new system. The old pump has been removed and the existing waterlines (two) may be connected together at the pump house.
  - (d) There is an electrical service in place in the pump house.
  - (e) Any parts of the existing system, which are to be removed and not used, are to remain the property of the City and shall be collected by the City as coordinated by the Contract Administrator.
- E10.3 Performance Criteria
- (a) The waterfall pump system is to be a submersible pump complete working system that supplies sufficient water to make the waterfall function. The flow rate is to be adjusted once

the system is functioning. The pump must be capable of a constant minimum supply at the waterfall head of 250 US gallons per minute.

- (b) The intent is that the pump, lines and all appurtenances remain in the river all year round. It may be required to remove the pump on occasion and disconnections for the supply pipe and the electrical must be accommodated at the riverbank. Any or all electrical connections and appurtenances must be submersible. It is to be noted that this connection location, at the end of the existing water line, will flood.
- (c) The pump is to be set on a sled base or other acceptable design that allows the pump to sit horizontally in the river. The pump must be deep enough to be clear of any boats or other river surface disturbances, but not sit on the bottom of the river. The pump/sled system is to be securely anchored to shore. Shore anchors are to be supplied and installed. Any anchoring to vegetation or native rock is unacceptable. The anchoring system must comply with all Federal, Provincial and Civic regulatory agencies and rules.
- (d) All reasonable steps are to be taken to make the equipment vandal resistant.
- (e) Refer to Drawing L2 for sketches and locations for the waterfall pump system.

#### E10.4 Shop Drawings

- (a) Further to CW 1110-R1, shop drawings shall be submitted to the Contract Administrator for the pump system within (14) fourteen Calendar Days of Award of Contract.
- (b) Shop Drawings shall include, but not be limited to:
  - (i) Pump.
  - (ii) Custom pump sled base and anchoring system.
  - (iii) Mechanical and electrical schematics including any required P.Eng stamps.
  - (iv) Connections, fittings and any other appurtenances required.

#### E10.5 Materials

- (a) Pump
  - (i) Goulds 150 mm (6") Hi-Capacity 10 HP Submersible Pump; or, approved Substitute in accordance with B6.
- (b) Pump Sled
  - (i) Custom manufactured sled base, or other acceptable design, to meet the performance criteria and suitable for the intended use.

#### E10.6 Methods

- (a) The Contractor is to present the design and shop drawings to the Contract Administrator for review.
- (b) Upon approval of the shop drawings, the Contractor shall manufacture the parts of the system.
- (c) The Contract Administrator and the Owner's representatives shall inspect the parts prior to delivery to the Site and shall be notified of the installation on Site a minimum of twenty-four (24) hours in advance, so they may be present at the installation.

#### E10.7 Commissioning of System

- (a) All equipment and circuits are to be tested in the presence of the Contract Administrator. The Contractor is to instruct the City on all aspects of the system and its operations.
- (b) Once the system is functioning as intended, the Contractor shall proceed with the restoration of the waterfall. The water flow shall be adjusted as required to the satisfaction of the Contract Administrator.

- (c) Upon completion, all inspection and approval certificates, test reports, warranties, maintenance manuals, operating instructions, record drawings and other requirements shall be turned over to the City.
- (d) All clean up and Site restoration Work must be done to the satisfaction of the Contract Administrator.

#### E10.8 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a lump sum basis, for the Items of Work listed below, which price shall include all costs of design/build, material supply and installation, electrical, fittings and appurtenances to provide a complete working system. Site restoration shall be considered incidental to the Work.
- (b) Items of Work:
  - (i) Waterfall Pump System

### **E11. WATERFALL RESTORATION**

#### E11.1 General Description

- (a) This specification shall cover:
  - (i) The restoration of the pool basins within the waterfall as shown on the Drawings.
  - (ii) The relocation of existing rocks along the sides of the pool basins and around the concrete weirs, as required, to restore a natural looking setting for the waterfall.
  - (iii) The restoration of the rock stepping stone bridge at the base of the falls.
  - (iv) The restoration of the rock falls / water channel areas.
- (b) The restoration of the waterfall shall be done in conjunction with the re-establishment of water flow for the waterfall.
- (c) The extent of Work is shown on Drawing L2 and as determined on Site with the Contract Administrator.

#### E11.2 Materials

- (a) The existing rocks of the waterfall shall be used.
- (b) Should extra rock be required, the rock shall be Shoal Lake Granite to match the existing rock.
- (c) Adhesives and grouts shall be approved by the Contract Administrator.

#### E11.3 Methods

- (a) Basins
  - (i) All basins and basin edges are to be cleared of weeds and other debris.
  - (ii) The basins shall be excavated, vacuumed, washed, pressure washed or otherwise cleaned to remove all soil, silt, dislocated stones and debris. The rock bottoms shall be restored. Refer to Drawing K.4-AA.
  - (iii) The rock edging, around the basins, is to be restored using existing rocks.
  - (iv) The rock edging shall be adjusted once the water flow is established.
- (b) Weirs
  - (i) Concrete weirs or waterfalls are to be restored to original design intent. Refer to Drawing K.4-AA.
  - (ii) Rocks are to be relocated to cover the exposed concrete and fixed in place with industrial bonding agent and grout.

- (c) Stepping Stone Bridge
  - (i) The stepping stone bridge is to be restored to original design intent. Refer to Drawing K.4-AA.
  - (ii) This Work shall be done in conjunction with the pathway renovation.
  - (iii) The rocks shall be adjusted once the water flow is established.
- (d) Rock Falls / Water Channel
  - (i) The extent of the renovation of the water channel shall be determined once the water is flowing.
  - (ii) Some of the rocks from the water channel may be used to restore the edges.
- (e) Removals and Disposition
  - (i) All removed materials are to be disposed of off Site in a safe and legal manner.

#### E11.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a lump sum basis, for the Items of Work listed below, which price shall include all costs of clean up and rock relocation. Site restoration shall be considered incidental to the Work.
- (b) Items of Work:
  - (i) Waterfall Restoration

### **E12. PATHWAY RENOVATION**

#### E12.1 General Description

- (a) Pathway Renovation – Type I
  - (i) This specification shall cover the renovation of existing granular pathways.
- (b) Pathway Renovation – Type II
  - (i) This specification shall cover the renovation of existing granular pathways that are associated with the installation of French Drains as specified in E13.
- (c) Work under this section is to be coordinated with the rock wall and step restorations. New steps shall be supplied and installed as specified in E14.

#### E12.2 Bench Removal

- (a) The removal of the existing benches is to be considered incidental to the pathway renovation Work.
- (b) All existing benches are to be removed including any bases or foundations in their entirety.
- (c) All areas, where items have been removed, are to be restored to a clean, level and safe surface.
- (d) All removed materials are to be disposed of off Site in a safe and legal manner.

#### E12.3 Materials: Pathway Renovation – Type I

- (a) Granular to CW 3110-R9:
  - (i) Sub-base: Existing granular path surface.
  - (ii) Base: Min. 75 mm depth of 19 mm down crushed limestone, compacted.
  - (iii) Top: 25 mm of 6mm down crushed limestone, compacted.

#### E12.4 Materials: Pathway Renovation – Type II

- (a) Granular to CW 3110-R9:
  - (i) Sub-base: Existing granular path surface.

- (ii) Base: Min. 75 mm depth of 19 mm down crushed limestone, compacted.
- (iii) Top: 50 mm of 38 mm clean washed crushed limestone.

**E12.5 Methods: Pathway Renovation – Type I**

- (a) Layout of pathway is to follow existing paths and sitting areas.
- (b) Path edges are to be neatly trimmed. Minimum path width is to be 1.2 M.
- (c) Rock edges are to be removed from areas indicated on the Drawings and as directed on Site by the Contract Administrator. These rocks shall be recycled on Site.
- (d) Soil, turf, weeds and other extraneous materials shall be removed from the existing path surface. The path surface is to be scarified.
- (e) Pathways are to be regraded as required and topped up as indicated in E12.3.
- (f) Where granular paths meet asphalt paths, the surfaces are to meet level. All granular is to be cleaned up from adjacent surfaces.

**E12.6 Methods: Pathway Renovation – Type II**

- (a) Layout of pathway is to follow existing paths. Revised grades are to be site established by the Contractor and subsequently be approved by the Contract Administrator. No new grades shall exceed 3%.
- (b) Path edges are to be neatly trimmed. Minimum path width is to be 1.2 M.
- (c) Rock edges are to be removed from areas indicated on the Drawings and as directed on Site by the Contract Administrator. These rocks shall be recycled on Site.
- (d) Soil, turf, weeds and other extraneous materials shall be removed from existing path surface. The path surface is to be scarified.
- (e) New rock steps are to be installed as specified in E14. The paths are to be re-graded and reconstructed to accommodate the new steps.
- (f) Paths are to be graded to remove erosion furrows and to have a cross slope of  $\pm 1\%$  to the French Drain.
- (g) Trenches for the French Drain, as specified in E13, are to be located as shown on the Drawings and as directed on Site by the Contract Administrator.
- (h) Pathways are to be topped up as indicated in E12.4 after the French Drains are complete.

**E12.7 Basis of Payment**

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a square metre basis, for the Items of Work listed below, which price shall include all cost of material supply, sub-grade preparation, and proper material installation. Site restoration and removal of existing benches shall be considered incidental to the Work.
- (b) Items of Work:
  - (i) Pathway Renovation – Type I
  - (ii) Pathway Renovation – Type II

**E13. FRENCH DRAIN SYSTEM**

**E13.1 General Description**

- (a) This specification shall cover the supply and installation of french drain systems within pathways.
- (b) Work under this section is to be coordinated with the Pathway Renovation – Type II and the construction of new rock steps.

#### E13.2 Materials

- (a) Drain Pipe
  - (i) Multi Flow Drain System 150 mm, complete with end caps, connectors and all appurtenances required to make a working system.
- (b) Granular
  - (i) 6 mm washed pea stone

#### E13.3 Methods

- (a) This system is to be used for those paths indicated as having erosion of the path surfaces, in conjunction with Pathway Renovation – Type II.
- (b) The construction of new rock steps shall be done in conjunction with this Work as specified in E14.
- (c) Trenches shall be dug in locations shown on Drawings and as directed on Site by the Contract Administrator. All trenched material is to be disposed of off site.
- (d) Drain pipe shall be installed as shown on Drawings. Trenches shall be backfilled with pea stone taking care to locate drain pipe in centre of trench.
- (e) Interceptor drains are to be placed across the path at the top of steps and as shown on the Drawings.
- (f) Drain outlets are to be directed to the waterfall or the lake.

#### E13.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a linear metre basis, for the Items of Work listed below, which price shall include all costs of material supply, trenching, and proper material installation. Site restoration shall be considered incidental to the Work.
- (b) Items of Work:
  - (i) French Drain

### **E14. ROCK STEPS**

#### E14.1 General Description

- (a) This specification shall cover the restoration of the existing rock steps.
- (b) This specification shall cover the construction of new rock steps.

#### E14.2 Materials

- (a) Existing rocks shall be used for the restoration.
- (b) Rock for new steps is to be Shoal Lake granite rocks to match existing rock.
- (c) 6mm down crushed limestone. Refer to E12 for granular materials.

#### E14.3 Methods: Restoration of Existing Steps

- (a) The extent of Work is to be marked out on Site with the Contract Administrator.
- (b) Existing rock steps are to be lifted. Granular base is to be added to level the steps and the rocks are to be replaced.
- (c) Granular step treads are to be topped up with 6mm down crushed limestone and compacted.

#### E14.4 Methods: New Rock Steps

- (a) The location of the new steps shall be determined on Site with the Contract Administrator.
- (b) The pathway shall be excavated in those areas and re-graded to accommodate the new steps.
- (c) Rock steps with three risers are to be constructed using the same methods as the existing steps. Refer to Drawings 3/L3 and K.4-AA.
- (d) Existing rocks from the Site are to be relocated to the sides of the steps to adjust adjacent grades.
- (e) French Drain interceptors are to be constructed across the top step.

#### E14.5 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a lump sum basis, for the Items of Work listed below, which price shall include all costs of labour, equipment and installation. Site restoration shall be considered incidental to the Work.
- (b) Items of Work:
  - (i) Rock Step Restoration
  - (ii) New Rock Steps

### **E15. ROCK WALL RESTORATION**

#### E15.1 General Description

- (a) This specification shall cover the renovation of rock walls throughout the rock gardens.
- (b) The extent of Work is shown on Drawing L4 and as determined on Site with the Contract Administrator.
- (c) Work under this section is to be coordinated with the renovation of planting beds as specified in E16.

#### E15.2 Materials

- (a) Existing rocks shall be used.

#### E15.3 Methods

- (a) The extent of Work is to be marked out on Site with the Contract Administrator.
- (b) The rock walls are to be removed. The wall area is to be cleaned of weeds and other extraneous materials. The rock walls are to be rebuilt to original design intent. Refer to Drawings L4 and K.4-AA.

#### E15.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a lump sum basis, for the Items of Work listed below, which price shall include all costs of labour, equipment and installation. Site restoration shall be considered incidental to the Work.
- (b) Items of Work:
  - (i) Rock Wall Restoration

### **E16. PLANTING BED RENOVATION**

#### E16.1 General Description

- (a) This specification shall cover the renovation of planting beds including the removal of plant material and the replacement of planting soil.



- (b) Work under this section is to be coordinated with the restoration of rock walls as specified in E15.

#### E16.2 Materials

- (a) Topsoil: As per CW 3540-R4.

#### E16.3 Methods

- (a) The extent of Work is to be marked out on Site with the Contract Administrator.
- (b) Plant material and weeds are to be removed in their entirety and disposed of off site in a legal manner.
- (c) Unsuitable soil is to be removed. Soil is to be rototilled and new topsoil added to a minimum depth of 300 mm.
- (d) Annual Beds are to be included in the planting bed renovation. The rock edges shall be lifted and replaced as required.
- (e) Site shall be cleaned up of spilled materials and restored to the satisfaction of the Contract Administrator.

#### E16.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a square metre basis, for the Items of Work listed below, which price shall include all costs of labour, equipment and material supply and installation. Site restoration shall be considered incidental to the Work.
- (b) Items of Work:
  - (i) Planting Bed Renovation

### **E17. PLANT MATERIAL**

#### E17.1 General Description

- (a) This specification shall cover the supply and installation of plant material within the areas of planting bed renovation.

#### E17.2 Materials

- (a) Plant Material
  - (i) Plant Specification List is on Drawing L4. The plants are divided into three groups and a minimum of three varieties are to be chosen from within each group. The Contractor shall submit a list of plants and quantities to the Contract Administrator for review. The Contract Administrator shall attend a single Winnipeg area location where he shall inspect and tag the listed plant material.
  - (ii) Quality and source is to comply with Canadian Standards for Nursery Stock, Seventh Edition of Canadian Nursery Landscape Association (C.N.L.A.) referring to size and development of plant material and root ball. Measure plants when branches are in their natural position. Height and spread dimensions refer to main body of plants and not from branch top to branch top.
  - (iii) Plants are to be free of disease, insect infestation, rodent damage, sun scald, frost cracks, abrasions, unhealed scars, scars exceeding 5cm in diameter, major forks or crooks in the trunk, broken branches, or angled leaders. Plants having the above defects will not be accepted by the Contract Administrator.
  - (iv) Nursery stock is to be grown in nurseries under proper cultural practices as recommended by the C.N.L.A. Only nursery stock grown for at least the last four (4) years in nurseries located in an Agriculture Canada Plant Hardiness Zone of 2 (a or b) or 3 (a or b) will be accepted.

- (b) Planting soil is to CW 3540-R4.
- (c) Water is to be potable and free of minerals which may be detrimental to plant growth.
- (d) Fertilizer is to be a slow release formulation of low nitrogen and high phosphorus e.g. 10-50-12 Apply quantities at rates stated by product manufacturer.
- (e) Mulch shall be clean bark or wood chip mulch with chips not less than 15mm or larger than 75mm in size and not more than 20mm thick. Mulch shall be free of leaves, branches and other extraneous matter.

#### E17.3 Method

- (a) Plants are to be planted according to Details on Drawing L4.
- (b) The Contractor shall obtain all above and underground clearances from all utilities. Clearances shall be obtained in a timely manner so as not to jeopardize the schedule of the complete planting operation.
- (c) Coordinate shipping of nursery stock and excavation of holes to ensure minimum time laps between digging and planting. Tie branches of nursery stock securely, and protect plants against abrasion, exposure and extreme temperature change during transit. Avoid binding of plants with rope or wire which would damage bark, break branches or destroy natural shape of plant. Give full support to root ball of nursery stock during lifting. Cover plant foliage with tarpaulin, and protect bare roots by means of dampened straw, peat moss, saw dust or other acceptable material to prevent loss of moisture during transit and storage. Remove broken and damaged roots with sharp pruning shears. Make clean cuts, and cover cuts over 10mm diameter with a tree wound dressing.
- (d) Location of plant material will be staked out or painted on Site by the Contractor and the Contract Administrator prior to planting.
- (e) The Contractor shall coordinate operations, keeping the Site clean and the planting holes drained. The Contractor shall immediately remove soil or debris spilled onto street pavement, grass or pathways.
- (f) Installation shall be done during periods of suitable weather conditions and in accordance with locally accepted practice. The planting program is to be planned to ensure that plants delivered to the Site at designated planting locations are installed and thoroughly watered the same day as delivery.
- (g) Loosen bottom of planting hole to depth of 100-150mm. Cover bottom of each excavation with minimum of 150 mm topsoil mixture, incorporate with sub-grade material.
- (h) Orient shrubs to give best appearance in relation to pathways. Place nursery stock to depth equal to depth they were originally growing in nursery. With balled and burlapped root balls and root balls in wire baskets, loosen burlap and cut away the top 1/3 without disturbing root ball. Do not pull burlap or rope from under root ball. Non-biodegradable wrapping must be removed. Tamp planting soil around root system in layers of 150mm 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.
- (i) Each plant is to have an earth saucer at its base having a diameter as large as the excavation with a 75 mm lip formed at the perimeter of the saucer to retain water. When planting is completed, give surface of planting saucer dressing of fertilizer and mix fertilizer thoroughly with top layer of planting soil and water in well.
- (j) Planting beds are to have wood chip mulch spread over them to 100 mm depth.

#### E17.4 Warranty

- (a) Standard one (1) year warranty.

**E17.5 Maintenance Period**

- (a) The Contractor shall undertake maintenance of all plant material from the date of Certificate of Substantial Performance until July 1, 2007.

**E17.6 Basis of Payment**

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a per unit basis, for the Items of Work listed below, which price shall include all costs of material supply, and proper material installation. The supply and installation of mulch shall be considered incidental to the Work.
- (b) Items of Work
  - (i) Plant Material – Group I
  - (ii) Plant Material – Group II
  - (iii) Plant Material – Group III

**E18. SITE FURNITURE**

**E18.1 General Description**

- (a) This specification shall cover the supply and installation of new benches.

**E18.2 Materials**

- (a) DuMor, Inc. Site Furnishings, Bench 88-60PL, recycled plastic. They shall be 1.8M (6') in length and have armrests. They shall have the embedment support option S-1. Colour shall be Deep Red for the metal and Redwood for the recycled plastic.

**E18.3 Methods**

- (a) New benches are to be installed according to Drawings and manufacturer's specifications.
- (b) Tops of concrete footings are to be 200mm below finished grade. Site furnishings are to be kept clean of any granular, concrete or other materials. Any damaged surfaces shall be touched-up to the satisfaction of the Contract Administrator.

**E18.4 Basis of Payment**

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a per unit basis, for the Items of Work listed below, which price shall include all costs of material supply, and proper material installation. Site restoration shall be considered incidental to the Work.
- (b) Items of Work:
  - (i) Benches