



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 674-2010**

**BOURKEVALE C.C. RIVER ACCESS AND CANOE LAUNCH IMPROVEMENTS**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 BOURKEVALE C.C. RIVER ACCESS AND CANOE LAUNCH IMPROVEMENTS

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, September 15, 2010.

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

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

### **B3. SITE INVESTIGATION**

B3.1 Further to C3.1, the Bidder may view the Site without making an appointment.

B3.2 The Bidder is advised that they should visit the Site to determine the Construction access route, existing fence barriers, existing terrain, and existing riverbank vegetation to be protected.

### **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 Division website 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 Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B5.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 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 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.

B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

## **B7. BID COMPONENTS**

B7.1 The Bid shall consist of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices;

B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.

B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.

B7.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.

B7.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:

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

B7.5.1 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.

B7.6 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.

B7.7 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).

B7.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.

B7.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B7.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

## **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 10 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;
  - (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 should be printed below such signatures.
- B8.4.2 All signatures shall be original.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B10. QUALIFICATION**

- B10.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
  - (b) be financially capable of carrying out the terms of the Contract; and
  - (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>
- B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) have successfully carried out Work similar in nature, scope and value to the Work; and

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

B10.4 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractors 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>)

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

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

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

B11.1 Bids will not be opened publicly.

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/bidopp.asp>

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 9 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 for the time period specified in Paragraph 9 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 10 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 10 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.

#### **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 there from (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.
- 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 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 Prices of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by progressively deducting item(s) 10, 2, 12, 13, 5a, 14, 16a, and 16b in the order listed, until a Total Bid Price within the budgetary provision is achieved.
- 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.

## **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.

B15.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.

B15.5 The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

## **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 the Construction of walkways, viewing plaza, and fishing plaza/canoe launch.

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

- (a) Site grading
- (b) Supply and installation of walkways and a viewing plaza
- (c) Construction of a river level fishing plaza and canoe launch
- (d) Fence installations

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

D3.1 The Contract Administrator is Ken Rech Landscape Architects Inc., represented by:

Ken Rech  
Landscape Architect  
1480 Wellington Crescent, Winnipeg, Manitoba, R3N 0B3  
Telephone No. (204) 489-6616  
E-mail: kenrech@mts.net

D3.2 At the pre-Construction meeting, Ken Rech 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 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: City Solicitor  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

## **SUBMISSIONS**

### **D6. AUTHORITY TO CARRY ON BUSINESS**

- D6.1 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.

### **D7. SAFE WORK PLAN**

- D7.1 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.
- D7.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

### **D8. INSURANCE**

- D8.1 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 and Ken Rech Landscape Architects Inc. added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
  - (b) 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) at all times during the performance of the Work and until the date of Total Performance;
- D8.2 Deductibles shall be borne by the Contractor.
- D8.3 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than seven (7) Calendar Days from notification of the award of Contract by Purchase Order.
- D8.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

## **D9. PERFORMANCE SECURITY**

- D9.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), 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.
- D9.1.1 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.
- D9.2 The Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of Purchase Order and prior to the commencement of any Work on the Site.

## **SCHEDULE OF WORK**

### **D10. COMMENCEMENT**

- D10.1 The Contractor shall not commence any Work until he is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.
- D10.2 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 D6;
    - (ii) evidence of the workers compensation coverage specified in C6.15;
    - (iii) the Safe Work Plan specified in D7;
    - (iv) evidence of the insurance specified in D8;
    - (v) the performance security specified in D9;
- D10.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

### **D11. CRITICAL STAGES**

- D11.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
- (a) Supply and installation all the Work along the river's edge ie. canoe launch/fishing platform, rip rap protection, must be completed by November 15, 2010, in order to be ready for the rise of water level in the spring of 2011.
  - (b) The viewing plaza and adjacent steps must be completed by November 15, 2010.

### **D12. SUBSTANTIAL PERFORMANCE**

- D12.1 The Contractor shall achieve Substantial Performance by June 1, 2011.

D12.2 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.

D12.3 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.

### **D13. TOTAL PERFORMANCE**

D13.1 The Contractor shall achieve Total Performance by June 10, 2011..

D13.2 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.

D13.3 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.

### **D14. LIQUIDATED DAMAGES**

D14.1 If the Contractor fails to achieve Critical Stages, Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Calendar Day for each and every Calendar Day following the days fixed herein for same during which such failure continues:

- (a) November 15, 2010 deadline – six hundred dollars (\$600.00);
- (b) Substantial Performance – six hundred dollars (\$600.00);
- (c) Total Performance - six hundred dollars (\$600.00).

D14.2 The amounts specified for liquidated damages in D14.1 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.

D14.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

### **D15. SCHEDULED MAINTENANCE**

D15.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Thirty Day sod maintenance, as specified in CW 3510 Sodding;

D15.2 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

### D16. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D16.1 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

### D17. INVOICES

D17.1 Further to C12, the Contractor shall submit an invoice for each order delivered to:

The City of Winnipeg  
Corporate Finance - Accounts Payable  
4th Floor, Administration Building, 510 Main Street  
Winnipeg MB R3B 1B9

Facsimile No.: (204) 949-0864  
Email: [CityWpgAP@winnipeg.ca](mailto:CityWpgAP@winnipeg.ca)

D17.2 Invoices must clearly indicate, as a minimum:

- (a) the City's purchase order number;
- (b) date of delivery;
- (c) delivery address;
- (d) type and quantity of goods delivered;
- (e) the amount payable with GST and MRST shown as separate amounts; and
- (f) the Contractor's GST registration number.

D17.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D17.4 Bids Submissions must be submitted to the address in B7.5.

### D18. PAYMENT

D18.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

## WARRANTY

### D19. WARRANTY

D19.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter, except where longer warranty periods are specified in the respective Specification sections, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

D19.1.1 For the purpose of Performance Security, the warranty period shall be one (1) year.

D19.2 Notwithstanding C13.2, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.



D19.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

**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. 674-2010

BOURKEVALE C.C. RIVER ACCESS AND CANOE LAUNCH IMPROVEMENTS

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. 674-2010  
BOURKEVALE C.C. RIVER ACCESS AND CANOE LAUNCH IMPROVEMENTS

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>
L1	Site Plans
L2	Viewing Plaza Details
L3	Miscellaneous Details
G1	Proposed Fishing Plaza and Canoe Launch
G2	Fishing Plaza and Canoe Launch Plan View
G3	Cross Sections 1, 2, and 3
G4	Cross Sections 4 and 5
G5	Proposed Grade Elevations & Pile Layout
G6	Helix Pile Details
G7	Construction Notes

#### E2. SCHEDULE

- E2.1 Further to D11 Critical Stages the Contractor is made aware the fishing plaza and canoe launch platform along the Riverbank as shown on drawings G1 to G7, including all rip rap protection must be constructed while the river water level is lowered for the winter, to prevent any possibility of contamination of excavated materials with the Assiniboine River waterway, and to permit Construction during the winter water levels. This Work is to be completed by November 15, 2010.
- E2.2 The off leash dog run fence is to be installed immediately at the start of the project, working from the east end westward. This fence will also help separate the public from the Contractor's Work area.
- E2.3 The Contractor shall also complete the installation of the viewing plaza and adjacent steps by November 15, 2010.
- E2.4 The Contractor is encouraged to complete as much Work as possible during the Fall 2010 Construction season, to allow the project to be complete as early as possible in 2011.

#### E3. WORK BY OTHERS

- E3.1 The City of Winnipeg, Natural Services Branch will be responsible for the seed restoration only of the lower riverbank area, where the Contractor will be installing a 150 mm depth of topsoil. All other items of Work shown on the drawings are the responsibility of the Contractor to supply and install.

E3.2 The east parking lot is considered to be the Construction access point, and the Contractor is made aware this parking lot is utilized regularly by the City of Winnipeg Water and Waste Department to maintain their pumping station. As such, the Contractor must not impede access to the pumping station and shall not park vehicles near the pumping station, nor store Construction materials around the pumping station.

#### **E4. PERMITS**

E4.1 The Contractor is responsible to apply for and pay for all permits required by the City, Province or Federal Governments.

E4.2 The Contract Administrator has made the Department of Fisheries and Oceans aware of this Work and submitted the drawings to that department.

E4.3 The Contract Administrator has made application for a River's and Streams Waterway Permit. The Contractor will not need to make that application.

E4.4 The Contract Administrator has submitted the drawings to the City of Winnipeg, for a Development Permit.

E4.5 There will not be any separate payment for Permit Costs. All Permit Costs are considered incidental to the overall project costs.

#### **E5. DEPARTMENT OF FISHERIES AND OCEANS JURISDICTION**

E5.1 The Contractor is made aware that they will be working in and adjacent to the Assiniboine River, and as such, their Construction may be monitored by the Federal Department of Fisheries and Oceans.

E5.2 The Contractor must not deposit or allow any Site materials to erode and wash into the River, including any excavated materials or newly installed ground materials.

E5.3 The Contractor is to provide erosion control devices as indicated on drawing G7 –Materials: Silt Fence and Stenlog notes, and as satisfactory to the Department of Fisheries and Oceans and the Contract Administrator, at their own expense. Such erosion control methods must be satisfactory to prevent any excavated or deposit riverbank material from eroding and entering into the Assiniboine River waterway.

E5.4 The Contractor shall erect a suitable safety fence as noted on drawing G7 – Safety Fence notes.

E5.5 The Contractor shall accelerate all Work closest to the river in the Work schedule, so as to complete the Work by November 15, 2010.

E5.6 Should the Contractor not provide adequate protection to prevent contaminants from entering the river, and should the Department of Fisheries and Oceans levy fines on this Work, the Contractor will be responsible for paying for any fines assess against the City of Winnipeg or Ken Rech Landscape Architects Inc.

E5.7 Measurement and Payment. The cost for installation of all erosion control methods is to be included in Unit Price Item No: 1 "Erosion Control Devices". The price shall include all material and labour costs associated with providing temporary erosion control procedures, and safety fencing, satisfactory to the Contract Administrator and Department of Fisheries and Oceans.

#### **E6. PUBLIC ACCESS AND SITE SAFETY**

E6.1 This Site is currently utilized by the public on a daily basis and contains an off leash dog park, and as such the public and dogs must be separated from the Contractor's Work area. This Site is also extensively used throughout the winter for the off leash dog run and winter tobogganing.

- E6.2 The Contractor must accelerate the supply and installation of the new 1200 mm height chain link fence around the off leash dog compound, at the start of the project. This fence will provide an effective north /south separation between the Work area and the off leash dog compound.
- E6.3 The Contractor is required to install a safety fence around the lower fishing plaza/canoe launch platform, as indicated on drawing G7 – Safety Fence notes.
- E6.4 The Contractor is to also install a temporary safety fence along the south side of the existing east west parking lot, connecting to the new 1200 mm height off leash dog run fence to the west, and extending eastward to the existing east parking lot.
- E6.5 Suitable Warning signage and barricades are to be erected at the Site Construction access point, in the east parking lot, warning the public of the Work, and to stay clear of the Work area, and to use the west parking lot to access the off leash dog park.
- E6.6 The east end of this Site is extensively utilized in the winter for tobogganing, and as such the Contractor will have to ensure there are no safety hazards for the winter users of this Site. If necessary, and to the satisfaction of the Contract Administrator, the Contractor may be required to erect a Safety fence, along the east side of the Work area, which fence is to remain in place throughout the entire winter of 2010/2011. The Contractor shall remove all Construction material from the east parking lot, at the conclusion of the Construction at the end of the 2010 Construction season, to allow east parking lot to be utilized during the winter months.
- E6.7 Since this project will most likely carry over into the spring of 2011, at the end of 2010 Work season, the Contractor must ensure any hazards are clearly defined in the Work area, and suitable protection provided from the hazards, to the satisfaction of the Contract Administrator.
- E6.8 Measurement and Payment. No separate payment will be made for the supply and installation of Site Safety fencing. The Contractor shall include any costs for this Work in the appropriate unit price items of Work.

## **E7. LAYOUT OF WORK**

- E7.1 The Contractor shall set control lines and bench marks by means of stakes, buoys or marks and the Contractor shall make the completed Works conform to the lines and marks thus indicated. The Contractor shall be responsible for the careful preservation of all stakes and marks. Care must be taken that the Contract Administrator be notified immediately of the disturbance of any such stakes or marks; the cost of correcting any errors arising out of neglect of the Contractor or his agent or his employees, 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.
- E7.2 All layout Work shall be inspected and approved by the Contract Administrator prior to Construction. The Contract Administrator will provide instruction to the Contractor prior to the layout being undertaken, as to the intent of and location of all Site improvements. The new viewing plaza and the fishing platform/canoe launch will be located to best fit into the existing grade, at the finished grade elevations indicated on the drawings.
- E7.3 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 on account of any 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, but no claims shall be made on account of any delay occasioned thereby.
- E7.4 The Contractor shall locate and protect all underground utilities prior to commencing Construction.

## **E8. EXISTING SURVEY INFORMATION**

- E8.1 The Site plan is based on drawing data surveyed and supplied by Eng-Tech Consulting Limited, which was surveyed in 2010.



## **E9. SITE ACCESS**

- E9.1 Access to the Work areas shall be via the existing east parking lot, utilizing the route of the new walkway to gain access to the lower riverbank area. The limits of Site grading and surface restoration are shown on drawing detail 1-L1. The Contractor will be responsible for restoring any damage to the grass outside of the defined limits of grading, as a result of their operation, to prior Site condition, at no cost to the City. The unit price quantities reflect only those quantities and areas of surface restoration within the limits of grading shown on the drawings.
- E9.2 Should the Contractor wish to utilize another Site access route, the route must be approved by the Contract Administrator, and any restoration costs incurred by utilizing the Contractor's access route, must be borne by the Contractor and not the City.
- E9.3 The existing east parking lot may be utilized for temporarily storing Construction materials, but access to the pumping station for City maintenance vehicles must be maintained at all times. The Contractor must restore any damage to the parking lot as a result of their Construction activity to pre-Construction condition, at no cost to the City.
- E9.4 The Contractor shall install safety signage at the entrance to the Work area clearly identifying it is a Construction Site warning the public to stay clear of the Work Area.
- E9.5 All Construction material must be removed from the east parking lot at the conclusion of the 2010 Construction season to allow the east parking lot to be utilized over the winter months by the public.

## **E10. DEMOLITION AND SALVAGE**

- E10.1 In general terms demolition will include the following:
- (a) Removal of existing small trees and brush along the river's edge to allow for Site access and Construction of the fishing platform and canoe launch
  - (b) Removal of existing sod to allow for the Construction of the new walkways
- E10.2 In general terms salvage will include the following:
- (a) Relocation of existing wood bollards and associate chain
- E10.3 All items of demolition are to be legally disposed of off Site.
- E10.4 Measurement and Payment. Cost for Demolition Work is to be included in Unit Price Item No: 2 Earthwork and Grading. Items of Salvage for relocating existing wood bollards and chain are to be included in the appropriate entrance Unit Price Item No: 16a Relocate One Bollard and Add New Chain.

## **E11. EARTHWORK AND GRADING**

- E11.1 This specification shall amend and supplement City Specification CW 3170 and cover the operations relating to the earthwork and grading of the Site as shown on the Construction Drawings.
- E11.2 The Contractor shall construct the walkways, viewing platform, fishing platform/canoe launch within the limits indicated and as shown on the Construction Drawings. Any damage to the areas outside the Work limits, as a result of the Contractor's operation, must be restored to prior Construction condition, at no further cost to the City.
- E11.3 The Contractor is made aware that all excavated surplus material is to be removed and legally disposed of off Site.
- E11.4 The Contractor shall excavate or fill to the design grades shown less the appropriate allowance for granular surface treatment, or topsoil for areas to be seeded/sodded. Where design grades

are not shown, the new surface materials shall be installed to meet flush with surrounding grades, and sloped so as not to impede the existing drainage pattern.

- E11.5 Construction to the new design grades shall be accomplished by the excavation of material from high areas, and using the suitable excavated material along with imported clean earth fill for filling in the low areas as indicated by the elevations shown on Construction Drawings. Backfill shall be placed in a dry, thawed condition and shall be maintained free of moisture or frost.
- E11.6 The design gradient for all other areas shall be considered to be straight grade between the design elevations shown. Changes in grade at ridges or swales shall be gently contoured as directed by the Contract Administrator to provide future ease of grass mowing operations.
- E11.7 In fill areas where the difference between the existing ground elevation and the design elevation is less than 300 mm, the Contractor shall scarify the existing ground to a minimum depth of 100 mm prior to placement of any fill.
- E11.8 The Contractor shall construct all sub-grades in accordance with Specification CW 3110-R10. This shall include the use of suitable compaction equipment as approved by the Contract Administrator to achieve a minimum compaction of 98% Standard proctor Density. Lifts shall not exceed a compacted thickness of 150 mm.
- E11.9 Following earthmoving, rough grading and compaction, the Work areas shall be fine graded to provide a maximum deviation of 50 mm in 10 metres from the design grade with no low areas that hold water. The finished surface of all disturbed areas shall be dragged and smoothed in such a manner that there are no loose soil particles greater than 50 mm in maximum dimensions.
- E11.10 Measurement and Payment. The cost for rough grading will be paid based on a lump sum basis and shall be included in Unit Price Item No: 2 "Earthwork and Grading Form B: Prices. The price shall include all costs associated with the removal of existing vegetation and grass, excavating, loading and hauling of all excavated materials, as well as the grading and placement of all other Site materials, required to meet the sub-grade elevations.

## **E12. GEOTEXTILE FABRIC**

- E12.1 This specification shall amend and supplement City Specification CW 3130-R1 Supply and Installation of Geotextile Fabrics, and cover the operations relating to the placement of geotextile fabric the walkway interlocking paving and paving stones located within the fishing platform/canoe launch, as shown on the Construction Drawings.
- E12.2 Geotextile fabric for the fishing pier/canoe launch is specified on drawing G7 – Paving Stones and Subgrade notes.
- E12.3 Geotextile fabric for interlocking paved walkways shall be in accordance with CW 3130-R1.
- E12.4 Measurement and Payment. The cost for geotextile fabric shall be included in the appropriate unit price cost for walkway interlocking paving, or the lump sum cost for the Construction of the fishing platform/canoe launch.

## **E13. GRANULAR PAVING**

- E13.1 This Specification shall amend and supplement City Specification CW 3110-R10 and CW 3150-R4. The Work to be done by the Contractor under this Specification shall cover all phases of supply and placement of crushed limestone base course and surfacing materials necessary to install the new granular walkway or parking lot modifications.
- E13.2 There are three distinct areas of granular paving as identified and shown on drawing detail 1-L1 and 1-L3. Walkway granular paving located between the west parking lot and the entrance to the off leash dog compound (detail 1-L3) and the walkway between the steps and the fishing platform/canoe launch (detail 1-L1) shall consist of the supply and installation of a 200 mm

depth of 19 mm dia. crushed limestone down, with an additional 25 mm depth surface layer of 6 mm dia. crushed limestone down, and as per detail 10-L3. The granular paving for the east parking lot entranceway modifications, as located in drawing detail 3-L1 shall consist of the supply and installation of a 200 mm depth of 19 mm dia. crushed limestone down.

- E13.3 Compact all limestone paving to 98% Standard Proctor Density.
- E13.4 With respect to the limestone walk to the off leash dog run compound, this walkway will be field located by the Contract Administrator. The Contractor is made aware it will be installed across lands which currently slope and the Contractor will have to install the walkway with a 1% cross slope and cut or build up the side embankments as required to install the walkway to the new 1% cross slope.
- E13.5 The quantities and areas of all the granular paving is identified in the related unit prices.
- E13.6 The finished surface is to be within plus or minus 25 mm of established grade and cross section, but not uniformly high or low. Any surface irregularities shall be corrected by loosening and adding or removing material until surface is within specified tolerance.
- E13.7 The cost for the supply and installation of Granular Paving will be measured on a square metre basis and shall be included in the related area, as indicated in the Unit Prices for Items No: 5a, 5b and 16b on Form B: Prices.

#### **E14. FISHING PLATFORM AND CANOE LAUNCH**

- E14.1 Construction of the Fishing Platform and Canoe Launch is to done in accordance with Eng-Tech Limited Construction drawings G1 to G7. Eng-Tech Drawing information shall take precedence over drawings L1 – L3.
- E14.2 Armor Tile warning strips as shown on drawing G-2 are to be as manufactured by Armor Tile ADA or approved substitute in accordance with B6, and available from Alsip Building Supplies, tel: 667-3310. Product to be Cast in Place 4" x 24" Detectable Guidance Tile, directional tile, Federal Yellow 33538 Colour. Install all tiles in wet concrete as per manufacturer's recommendation and specifications. For installation procedure see manufacturer's website: [www.Armor-tile.com](http://www.Armor-tile.com)
- E14.3 Boat ramps to be Barkman Concrete item no: 45-8400 or approved substitute in accordance with B6. Install 4 sections of ramp as per manufacturer's recommendation flush with top of the rip rap.
- E14.4 Access to the fishing platform/canoe launch area is to be via the location of the new asphalt walkway.
- E14.5 The Contractor shall minimize all damage to the existing riverbank vegetation. No existing riverbank vegetation shall be removed beyond the limit of grading, without the permission of the Contract Administrator.
- E14.6 The Contractor shall install all silt fences and Stenlog during and post Construction to prevent soil or Construction debris from entering the river water system.
- E14.7 The Rip Rap, as specified on drawing G7 – Rip-Rap will be paid for on a per unit basis, per tonne weight. The Contractor must provide the Contractor Administrator with all weight bills for the Rip Rap. Granular base for paving stones will paid for on a lump sum basis as part of the lump sum cost for the entire fishing platform/canoe launch. All other Work shown on drawings G1 to G7 will be paid on a lump sum basis as part of the lump sum cost for the entire fishing platform/canoe launch.
- E14.8 Should hoarding and heating of the concrete be required as a result of cold weather, the Contractor shall provide the same at no further cost to the City. See Concrete Note on drawing G-7 for hoarding and heating standards.

E14.9 Measurement and Payment for Rip Rap. The cost for Rip Rap will be paid based on a per unit weight, per tonne of material supplied and installed, and as identified in Unit Price Item No: 4. Payment for this item will include all costs for the material, transport of the material, and installation of the material to the satisfaction of the Contract Administrator.

E14.10 Measurement and Payment for Fishing Platform/Canoe Launch Structure. The cost for complete installation of the Fishing Platform/Canoe Launch Structure will be paid based on a lump sum basis, and as identified in Unit Price Item No: 3. Payment for this item shall include all costs for: Site grading; demolition or removal of existing vegetation; piling; concrete Work; geotextile; granular base for paving stones, paving stones; Barkman boat ramps: Amor Tile warning strips; hoarding and heating if required; and all other Work incidental to the supply and installation of the complete fishing platform/canoe launch structure.

## **E15. INTERLOCKING PAVING**

E15.1 Interlocking paving shall be installed in accordance with CW 3330-R3 Specification for Installation of Interlocking Paving Stones.

E15.2 Granular base for interlocking paving stones located in within the fishing platform/canoe launch structure is specified on drawing G-7 Paving Stones and Sub-Grade notes.

E15.3 Granular base for Site walkways and viewing plaza shall be 19 mm crushed limestone down.

E15.4 Levelling base shall be crushed limestone, 6 mm crushed limestone down.

E15.5 Sand infill between paving stones shall be Techniseal RG Polymeric sand, "Prairie Rose" colour or approved substitute in accordance with B6.

E15.6 Paving stones shall be as manufactured by Barkman or approved substitute in accordance with B6. Stones to be Holland stone, 80 mm thickness, "Old Town" colour.

E15.7 Edging for paving shall be "Snap Edge" or approved substitute in accordance with B6. Fasteners for edging shall be 250 long steel spikes.

E15.8 Geotextile fabric to be in accordance with E12 Geotextile Fabric.

E15.9 Install granular base for interlocking paving a minimum 150mm past all edges of the paving stones, to permit the snap edge to be installed on a compacted granular base.

E15.10 Install paving stones with a perimeter soldier course along all outside edges and with the main areas of the paving stone being installed in a herringbone pattern. See drawing detail 9-L3 for paving pattern and detail 8-L3 for Construction method.

E15.11 Measurement and Payment: The cost for the supply and installation of interlocking paving will be paid for on a per square metre basis, and as identified in Unit Price Item No: 6. The cost for interlocking paving located within the fishing platform/canoe launch structure is to be included in the lump sum cost of the fishing platform/canoe launch structure and as identified in Unit Price Item No: 4 Payment for Interlocking Paving shall include all costs for: the excavation of the walkway; geotextile fabric; gravel base; snap edge retainer; paving stones; sand infill; and all other Work necessary to complete the supply and installation of the paving stones.

## **E16. PRECAST CONCRETE STEPS**

E16.1 The Precast Concrete Steps shall be installed as per shape shown in detail 2-L2, and as per the Construction method shown in detail 3-L2.

E16.2 Granular base shall be 19 mm crushed limestone down.

E16.3 Reinforcing grid shall be Barkman Geogrid Item No: 35-70000, or approved substitute in accordance with B6.

- E16.4 Precast concrete steps shall be as manufactured by Barkman, Dura-Hold 2, coping stones, Item No: 31-31009, or approved substitute in accordance with B6.
- E16.5 Install granular base in 150 mm height lifts, as steps are constructed, compacting to 98% Standard Proctor Density. Install geo-grid in the locations shown on the drawings.
- E16.6 Install Dura-Hold precast concrete step units to achieve a 150 mm riser per step. Butt adjacent step units tight to one another.
- E16.7 Measurement and Payment: The cost for the supply and installation of Precast Concrete Steps will be paid for on a lump sum basis, and as identified in Unit Price Item No: 7. Payment for Precast Concrete Steps shall include all costs for: the excavation of the step; rough grading under and around the step; granular base; geo-grid; Dura-Hold precast concrete steps; and metal handrails; and all other Work necessary to complete the supply and installation of the Precast Concrete Steps.

## **E17. METAL HANDRAILS**

- E17.1 This specification shall cover the supply and installation of steel hand railings by the precast concrete steps, as shown on drawing details 2, 3, 5, & 6 drawing L3.
- E17.2 Standards:
- (a) All metal railings shall be in accordance with C.W. 3550-R2 Chain Link Fencing sizing, finishes and welding.
- E17.3 Materials:
- (a) 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.
  - (b) All metal shall be hot dipped galvanized coated after fabrication.
  - (c) Metal posts and railings:
    - (i) Metal posts shall be schedule 40 galvanized steel, sizes as noted on the drawings.
  - (d) Weld touch up finish:
    - (i) All welds shall be continuous and ground smooth.
    - (ii) Paint shall be Zinc pigmented and approved by the Contract Administrator.
  - (e) Concrete shall be in accordance with drawing G7 – Concrete Notes.
- E17.4 Methods:
- (a) Steel posts shall be fabricated to the size, length shown on the drawings. The top of the posts shall be cut to a 45 degree angle and welded close with a metal cap, with the welds ground smooth.
  - (b) All welds are to be continuous and ground smooth.
  - (c) All hand rails shall be installed parallel to the step slope and the same height above the steps.
  - (d) End of railings at the foot and top of landings shall extend a minimum 600 mm past the last riser or as per dimensions shown on the drawings.
  - (e) All Site welds or damaged to the galvanized finished is to be field touched up with two (2) coats of paint.
- E17.5 Measurement and Payment: The cost for the fabrication and installation of Metal Handrails will be paid for on a lump sum basis, and as identified in Unit Price Item No: 8. Payment for Metal Handrails shall include all costs for: the concrete footings; metal posts; metal handrails; and all other Work necessary to complete the supply and installation of the Metal Handrails.

## **E18. PRECAST CONCRETE RETAINING WALLS**

- E18.1 This specification covers the supply and installation of precast concrete retaining walls located around the viewing plaza and as shown on drawing details 1-L3 and to Construction detail 4-L2.
- E18.2 The Warranty on the precast concrete retaining walls shall be extended to ten (10) years against the wall coming apart, including light vandalism (pulling the cap or blocks apart without equipment or tools). Ten year warranty does not have to be covered beyond one (1) year performance bond term.
- E18.3 **Materials**
- (a) Precast concrete retaining wall shall be constructed with Barkman Concrete Roman Pisa 2 Roman Stones, Desert Buff in colour, or approved substitute in accordance with B6. Cap stone shall be 300 mm width.
  - (b) Granular base shall be 19 mm diameter crushed limestone.
  - (c) Granular backfill for back of wall shall be 19 mm clean crushed limestone.
  - (d) Filter fabric shall be Armtec 150 Nonwoven geotextile or approved substitute in accordance with B6.
  - (e) Adhesive shall be "Bond'Loc" or approved substitute in accordance with B6.
- E18.4 The Contractor shall install the concrete retaining walls to the shapes shown on drawing detail 1-L2.
- E18.5 Construct wall on granular base compacted to 98% Standard Proctor Density. Ensure wall is constructed with minimum one (1) full layer below finish grade.
- E18.6 Install geotextile filter cloth over all granular backfill behind the wall to ensure the soil does not fill the granular backfill spaces.
- E18.7 Glue all layers of the wall together with a double bead, minimum 9mm dia. bead, of adhesive. Glue top cap to wall with double bead, minimum 12mm dia. bead, of adhesive, including adhesive beads on sides of all caps. All joints on the wall units and the cap stones shall be staggered and not be closer than 50 mm to one another.
- E18.8 All cuts to the wall stones or the cap stones are to be rough up with a hammer to match the manufacturer surface appearance.
- E18.9 **Measurement and Payment:** The cost for the supply and installation of Precast Concrete Retaining Walls will be paid for on a lump sum basis, and as identified in Unit Price Item No: 9. Payment for Precast Concrete Retaining Walls shall include all costs for: the excavation of the walls; rough grading under and around the wall; granular base; granular backfill; filter fabric; Roman Pisa 2 stones; and all other Work necessary to complete the supply and installation of the Precast Concrete Retaining Walls.

## **E19. ASPHALTIC CONCRETE PAVING**

- E19.1 This Specification shall amend and supplement City Specification CW 3410-R7. The Work to be done by the Contractor under this Specification shall cover all phases of supply and placement of new asphalt paving walkway. See drawing 1-L1 for location of asphalt walkway and detail 15-L3 for Construction detail.
- E19.2 The Contractor is informed the asphalt walkway may not be awarded based on budgetary constraints. Should the asphalt walkway not be awarded, the Contractor will have to construct a temporary access route to the fishing platform/canoe launch area at their own expense. Restoration of the temporary access will not be included in the Contract, and will be undertaken by the City.

- E19.3 The walkway is to be field located and shall not exceed 20 horizontal to 1 vertical slopes, and be installed without a cross slope.
- E19.4 All new asphalt paving shall be installed to a minimum 50 mm thickness over a minimum 300mm depth of compacted 19 mm dia. crushed limestone down, compacted to 98% Standard Proctor Density. Granular paving shall extend 300 mm past each side of the asphalt paving.
- E19.5 Geotextile fabric shall be in accordance with E12 Geotextile Fabric.
- E19.6 Measurement and Payment. The cost for Supply and Installation of Asphalt Paving, will be paid for on a per square metre basis, and is to be included in the Unit Price Item No: 10. Payment for Asphalt Paving shall include all costs for: rough grading below and around the asphalt walk: geotextile; granular base; asphalt paving; and all other Work incidental to the supply and installation of Asphalt Paving.

## **E20. SUPPLY AND INSTALLATION OF SITE FURNITURE**

- E20.1 This specification will cover the installation of new benches at the viewing plaza.
- E20.2 Materials
- (a) Benches shall be Victorian 6' (1800mm) , manufactured by Cascades, Contour Series with back, end arms, in-ground mount, Sand lumber colour, and metallic grey metal frame, or approved substitute in accordance with B6. For information contact Playgrounds-R-Us Tel 632-7000.
  - (b) Concrete shall be in accordance with C.W. 2160-R6 Concrete for Underground Structures and Works.
- E20.3 Install new benches onto concrete filled holes, 400 mm dia. x 900 mm deep. Top of concrete to be set 100 mm below interlocking paving finish grade elevation.
- E20.4 Measurement and Payment: The cost for the supply and installation of Benches will be paid for on a per unit basis, and as identified in Unit Price Item No: 11. Payment for Benches shall include all costs for: the concrete footings; benches; and all other Work necessary to complete the supply and installation of the Benches.

## **E21. CHAIN LINK FENCING**

- E21.1 This specification shall cover the supply and installation of new fence materials.
- E21.2 This specification supplements and amends C.W. 3550 Chain Link Fencing.
- E21.3 The fencing will be field located by the Contract Administrator and at the time of the tender, the exact location of the fence has not been determined. The Contractor shall inspect the Site prior to submitting a bid to ensure they are familiar with the Work area, land slopes, and Site access.
- E21.4 All new fencing shall be 1200 mm height, with knuckled top and bottom fabric.
- E21.5 Two (2) pedestrian entrance openings are to be installed, with a 4000 mm width between fence posts. One (1) 3 metre wide vehicle gate is to also be installed.
- E21.6 The chain link mesh is to be installed 100 mm below grade, in a 600 mm wide x 100 mm deep trench backfilled with 19 mm dia. crushed limestone down. The Contractor is made aware the limestone base may not be awarded based on budgetary constraints, and if not awarded the mesh is to be installed 50 mm above finish grade elevations.
- E21.7 Measurement and Payment for the supply and installation of 1200 mm Ht. Chain Link Fencing will be paid for on a per lineal metre basis, and as identified in Unit Price Item No: 12. The cost for the supply and installation of the Vehicle Gate will be paid for on a per unit basis as identified in Unit Price Item No: 13. Payment for the Chain Link Fencing or Vehicle Gate shall include all

costs for: installation of posts; mesh; top rails; tension wire; etc. and all other Work necessary to complete the supply and installation of the Chain Link Fencing and Vehicle Gate.

- E21.8 Measurement and Payment for Limestone Paving: The cost for the supply and installation of Limestone Paving will be paid for on a per lineal metre basis, based on 600 mm width and 100 mm depth, and as identified in Unit Price Item No: 14.

## **E22. WOOD ARBOUR ENTRANCES**

- E22.1 This Specification shall cover the supply and installation of three overhead wood arbours as shown in Details 2-7 drawing L3 and as located on drawing 1-L1 and 1-L3.

- E22.2 The Contractor is made aware some or all of the wood arbours may not be awarded based on budgetary constraints.

### **E22.3 Materials**

- (a) Granular backfill shall be 19mm diameter crushed limestone.
- (b) Wood shall be green ACQ, No: 2 or better pressure treated pine, S4S (no incised marks), and size shown on the drawing details.
- (c) Chain shall be 6mm diameter galvanized coated.

- E22.4 Install wood posts in 400mm diameter holes, minimum 1500mm below grade, and backfill with compacted granular material in 150 mm lifts, installed completely up to finish grade. After the finished grade has been established, install wood cladding over the posts, as shown in detail 3-L3.

- E22.5 Install wood beams and rafters as per drawing details. All cuts shall be sanded smooth. End cut treatment on cuts is only required on the posts, not beam or rafter ends. Use light coloured end cut preservative.

- E22.6 The east parking lot entrance will require modifications to the existing wood bollards and chain system, to suit the new wood arbour location as shown in detail 3-L1. Relocate one existing wood bollards and associated chain, and install in new location, in gravel fill holed to suit existing depth installation. Add one section of new chain, securing new chain to wood arbour fence post, drilling hole through fence post to match existing bollard fastening system. Fill original bollard hole locations with compacted sand. New wood posts by sides of arbour only have to be installed 1200mm below grade.

- E22.7 Measurement and Payment for the supply and installation of Overhead Wood Arbours will be paid for on a per unit basis, and as identified in Unit Price Item No: 15. Payment for the Overhead Wood Arbour shall include all costs for: installation of the wood structure; adjacent fence posts; etc. and all other Work necessary to complete the supply and installation of the Overhead Wood Arbour.

## **E23. TOPSOIL AND FINISH GRADING**

- E23.1 This specification shall amend CW 3540-R5 Specification for Topsoil and Finish Grading for Establishment of Turf Areas.

- E23.2 The Contractor shall install the standard 75 mm depth of topsoil for all areas shown to be sodded.

- E23.3 The Contractor is to install a 150 mm depth of topsoil, graded smooth, at the lower riverbank area as noted on drawing detail 1-L1. The City of Winnipeg will be responsible for seeding the topsoil and providing erosion control methods for the seeded areas only.

- E23.4 The Contract Administrator shall be notified a minimum of seven (7) days in advance of when the Contractor will be installing the 150 mm depth of topsoil only, so the Contract Administrator can verify the City is ready to accept the topsoil for seeding/restoration.



- E23.5 The Contractor is made aware any damage to Site areas outside the Work limit, as a result of the Contractor's Work is to be restored to pre-Construction condition, at no cost to the City.
- E23.6 Measurement and Payment: The cost for the supply and installation of 75 mm depth of topsoil for sodded areas is to be included in the per square metre unit price cost for sod, and as identified in Unit Price Item No: 17.
- E23.7 Measurement and Payment: The cost for the supply and installation of 150 mm depth of topsoil (for areas to be seeded/restored by the City) will be paid on a per square metre basis, and as identified in Unit Price Item No: 18.

## **E24. PLANT MATERIAL**

E24.1 Description: This specification shall cover the supply and installation of shrubs and shrub bed installation.

### **E24.2 Materials**

#### **E24.2.1 General**

- (a) Trees/shrubs shall be the size and variety noted on the Plant List attached to the end of this specification section. Plant material which does not have the specified root ball diameter will be rejected.
- (b) All nursery stock supplied shall be Canadian prairie nursery grown, of the species and sizes indicated on the drawings. Quality shall be in accordance with the latest "Guide Specification for Nursery Stock of the Canadian Nursery Trades Association".
- (c) Any nursery stock dug from native stands, wood lots, orchards or neglected nurseries and which have not received proper cultural maintenance as advocated by the Canadian Nursery Trades Association, shall be designated as "collected plants". The use of "collected plants" will not be permitted unless approved by the Contract Administrator.
- (d) The Contract Administrator reserves the right to inspect the plant material at their original source, and to instruct the supplier on root and branch pruning requirements.
- (e) Nomenclature of specified nursery stock shall conform to the International Code of Nomenclature for Cultivated Plants and shall be in accordance with the approved scientific names given in the latest edition of standardized Plant Names. The names of varieties not names therein are generally in conformity with the names accepted in the nursery trades.
- (f) Plants larger than specified may be used if approved by the Contract Administrator. The use of such plants shall not increase the Contract price.
- (g) All nursery stock shall be measured when the branches are in their normal position. Height and spread dimensions specified refer to the main body of the plant and not from branch tip.
- (h) Where trees are measured by calliper (cal.), reference is made to the diameter of the trunk measured 300 mm above ground as the tree stands in the nursery.
- (i) All nursery stock shall be well branched, true to type, structurally sound, possess a well developed, undamaged root system and shall be free of disease, insect infestations, rodent damage, sunscald, frost cracks and other abrasion or scare to the bark. All parts of the nursery stock shall be moist and show live, green cambium when cut.
- (j) All trees shall have one only, sturdy, reasonably straight and vertical trunk and a well balanced crown with fully developed leader. All evergreens shall be symmetrically grown and branched from ground level up, and must be balled and burlapped unless noted otherwise on the plant list. At least one plant of each variety supplied shall bear a tag showing both the botanical and common name of the plant.

#### **E24.2.2 Protection of Stock**

- (a) All nursery stock shall be well protected from damage and drying out from the time of digging until the time of planting on Site. All roots shall be cleanly cut; split roots are not acceptable.
- (b) Nursery stock shall be transplanted with care to prevent damage. Branches shall be carefully tied in such a manner so as not to break or damage trunks. Points of contact with equipment shall be padded. All nursery stock, which cannot be planted immediately upon arrival at the Site, shall be well protected to prevent drying out and shall be kept moist until commencement of planting.

#### E24.2.3 Topsoil Backfill Mix

- (a) Backfill mix shall be screened garden soil mixture of two parts black loam topsoil, one part milled peat moss and one part sharp sand.

#### E24.2.4 Wood Chip Mulch

- (a) Shall be standard tree limbs and leaves chippings, containing a maximum of 5% conifer branches.

### E24.3 Construction Methods

#### E24.3.1 General

- (a) Shrub beds shall be excavated with vertical sides to the width shown on the drawings, and to a depth of 400mm. The excavated shrub bed shall be refilled with backfill mix (E24.2.3) to a 300mm depth, and covered with a 100mm depth of wood chip mulch.

#### E24.3.2 Installation

- (a) Upon excavation of the tree pits, and protection of any underground utility lines, the holes shall be backfilled with a topsoil mixture to a depth to permit adequate installation and stabilization of the plant material.
- (b) Each balled specimen shall be handled with great care, to ensure that the root balls will not be broken. Burlap shall be folded back only at the top and sides. Broken roots of deciduous stock shall be pruned back prior to planting.
- (c) After inserting the tree and filling the planting hole with topsoil, water shall be poured in until the pit is thoroughly soaked. Filling of the hole shall then be completed and the fill-in soil shall be packed firmly around the roots, leaving a concave surface for convenient watering 75 mm below rounding and grade elevation. After filling, the planting shall be watered at frequent intervals.
- (d) Planting shall be done during periods suitable to weather conditions and locally accepted practice. All nursery stock shall be set plumb in the centre of pits and at levels as shown on the planting details after settlement has taken place.
- (e) Nursery stock shall be faced to give the best appearance or relationship to adjacent structures and to the approval of the Contract Administrator.
- (f) Wood chip mulch shall be installed over the tree rootball as shown on the drawings.

#### E24.3.3 Pruning

- (a) All deciduous trees shall be pruned by a licensed Manitoba Arborist, immediately after planting. The amount of pruning shall be limited to the minimum necessary to remove dead or injured branches and to compensate for the loss of roots as a result of transplanting operations. Pruning shall be done in such a manner as to preserve the natural character of the plants. Leaders shall not be removed. Only clean, sharp tools shall be used. All cuts shall be clean and flush, leaving no stubs. Cuts, bruises or scars on the bark shall be traced back to living tissue and removed. The affected areas shall be shaped so as not to retain water and all cuts of more than 25 mm in diameter shall be painted with approved tree paint.
- (b) Wood chip mulch shall be installed over the tree rootball as shown on the drawings.

#### E24.3.4 Watering

- (a) All plant material shall be watered immediately after installation and shall be maintain for a further 30 days after the project is 100% complete.

**E24.4 Guarantee of Nursery Stock**

- (a) The Contractor shall agree and guarantee to replace and replant any nursery stock found dead and/or in poor condition within two years from the date of the Certificate of Total Performance, at his cost. "Poor condition" shall be interpreted as meaning nursery stock on which branches are dying, or have not shown satisfactory growth of leaves. All replacement plants shall be installed within five (5) working days from the date of notification from the City, unless the City extends the time period, as a result of seasonal or climatic considerations.
- (b) All required replacements shall be by plants of at least the same size and species as specified, and shall be supplied and planted in accordance with the original drawings and Specifications, and the replaced material shall carry an additional two-year guarantee and maintenance period. All trees must be in a healthy conditional for a full two years before the warranty will be considered fulfilled.

**E24.5 Measurement and Payment for the supply and installation of Shrubs will be paid for on a lump sum basis, and as identified in Unit Price Item No: 19. Payment for the Shrubs shall include all costs for: all shrubs shown on the Shrub Plant List located on drawing L1; installation of the shrubs; and 30 watering day maintenance of the shrub.**

**E24.6 Measurement and Payment for the supply and installation of Shrub Bed Topsoil and Wood Chip Mulch will be paid for on a per square metre basis, and as identified in Unit Price Item No: 20. Payment for the Shrub Bed Topsoil and Wood Chip Mulch shall include all costs for: excavation of the shrub beds; supply and installation of the topsoil and wood chip mulch.**

**E25. SITE RESTORATION**

**E25.1 Total Performance of the Work shall not be attained until the Contractor has cleaned up the Site and has removed all plant, tools, equipment, waste, debris and surplus foundation earth to the satisfaction of the Contract Administrator. Unless otherwise specified, the Contractor shall restore all areas of the Site beyond the established limit of Work, which have been disturbed by the Contractor's operations to as good as or better than the original condition to the satisfaction of the Contract Administrator. The Contractor shall pay all costs associated with this Work.**