



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 710-2014**

**1046 DES TRAPPISTES STREET – FLOOD PROTECTION WORKS,  
WINNIPEG, MANITOBA**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

1046 DES TRAPPISTES STREET – FLOOD PROTECTION WORKS,  
WINNIPEG, MANITOBA

### **B2. SUBMISSION DEADLINE**

- B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, August 29, 2014.
- B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.
- B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. SITE INVESTIGATION**

- B3.1 The Bidder can attend a Site meeting from 2 to 4:30 pm, August 21, 2014.
- B3.2 The Bidder shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

### **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. CONFIDENTIALITY**

- B5.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:
- (a) was known to the Bidder before receipt hereof; or
  - (b) becomes publicly known other than through the Bidder; or
  - (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.
- B5.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.

## **B6. ADDENDA**

- B6.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.
- B6.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B6.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B6.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B6.2.3 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.

## **B7. SUBSTITUTES**

- B7.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B7.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B7.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
  - (c) identify any anticipated cost or time savings that may be associated with the substitute;
  - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
  - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.
- B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.

- B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B15.
- B7.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B7.10 Notwithstanding B7.2 to B7.9, and in accordance with B8.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B15.1(a).

## **B8. BID COMPONENTS**

- B8.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices;
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B8.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B8.5 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**
- B8.5.1 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.
- B8.6 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.
- B8.7 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 B15.1(a).
- B8.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to 204 949-1178.

B8.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B8.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

## **B9. BID**

B9.1 The Bidder shall complete Form A: Bid, making all required entries.

B9.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
- (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.

B9.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B9.4 Paragraph 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/her own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
- (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B9.4.2 All signatures shall be original.

B9.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

## **B10. PRICES**

B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B10.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B10.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B11. QUALIFICATION**

### **B11.1 The Bidder shall:**

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

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

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

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

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

### **B11.4 Further to B11.3(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 copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR) Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (b) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (c) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>).

### **B11.5 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.**

### **B11.6 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.**

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

### **B12.1 Bids will not be opened publicly.**

### **B12.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be**



available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>

- B12.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B12.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

### **B13. IRREVOCABLE BID**

- B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 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 for the time period specified in Paragraph 9 of Form A: Bid.

### **B14. WITHDRAWAL OF BIDS**

- B14.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B14.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B14.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
  - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
  - (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.
- B14.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B13.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

### **B15. EVALUATION OF BIDS**

- B15.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity or acceptable deviation there from (pass/fail);
  - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B11 (pass/fail);
  - (c) Total Bid Price;
  - (d) economic analysis of any approved alternative pursuant to B7.

- B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.
- B15.4 Further to B15.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B15.4.1 Further to B15.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

## **B16. AWARD OF CONTRACT**

- B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B16.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B16.2.1 Without limiting the generality of B16.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
  - (b) the prices are materially in excess of the prices received for similar work in the past;
  - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
  - (d) only one Bid is received; or
  - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B16.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B15.
- B16.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.
- B16.4 Notwithstanding C4, the City may issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B16.5 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**

### **C1. GENERAL CONDITIONS**

- C1.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the WORK of the Contract.
- C1.1.1 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)
- C1.2 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

- MOB-DEMOBILIZATION AND SITE PREPARATION
- SUPPLY AND INSTALLATION OF RETAINING WALL (ROSETTATM STONE BLOCKS)
- RELOCATE EXISTING DYKE AND SAND BAGS
- SUPPLY AND PLACEMENT OF ADDITIONAL CLAY FILL FOR DYKE
- SUPPLY AND INSTALLATION OF ROSETTATM STEPS
- SITE GRADING, CONSTRUCTION OF POND AND SITE CLEAN-UP
- SUPPLY TOPSOIL AND SEEDS

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

D3.1 The Contract Administrator is ENG-TECH Consulting Limited, represented by:

CLARK HRYHORUK  
M.Sc., P.ENG.  
Email: ENG\_TECH@MTS.NET  
Telephone No. 204.233-1694  
Facsimile No. 204 235-1579

D3.2 At the pre-construction meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D3.3 Bids Submissions must be submitted to the address in B8.5.

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

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

#### **D5. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE**

D5.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.

D5.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D5.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;

- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;

- (b) the Contract, all deliverables produced or developed; and
- (c) any statement of fact or opinion regarding any aspect of the Contract.

D5.4 A Contractor who violates any provision of D5 may be determined to be in breach of Contract.

## **D6. NOTICES**

D6.1 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.

D6.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.3, D6.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the facsimile number identified in D3.1.

D6.3 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

D6.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services

Facsimile No.: 204 947-9155

## **SUBMISSIONS**

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

D7.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

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

D8.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D8.2 The Safe Work Plan 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>

### **D9. INSURANCE**

D9.1 The Contractor shall provide and maintain the following insurance coverage:

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

D9.2 Deductibles shall be borne by the Contractor.

D9.3 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.

D9.4 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.

## **D10. PERFORMANCE SECURITY**

D10.1 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.

D10.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D10.2 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.

## **D11. SUBCONTRACTOR LIST**

D11.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

## **D12. DETAILED WORK SCHEDULE**

D12.1 The Contractor shall provide the Contract Administrator with a detailed work schedule (Form I: Detailed Work Schedule) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

## **SCHEDULE OF WORK**

### **D13. COMMENCEMENT**

D13.1 The Contractor shall not commence any Work until he/she is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.

D13.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
  - (i) evidence of authority to carry on business specified in D7;
  - (ii) evidence of the workers compensation coverage specified in C6.15;
  - (iii) the Safe Work Plan specified in D8;
  - (iv) evidence of the insurance specified in D9;
  - (v) the performance security specified in D10;
  - (vi) the Subcontractor list specified in D11; and
  - (vii) the Detailed Work Schedule specified in D12.
- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

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

D13.4 The City intends to award this Contract by September 19, 2014.

D13.4.1 If the actual date of award is later than the intended date, the dates specified for Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

### **D14. CRITICAL STAGES**

D14.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) All earthwork needed for flood protection be completed before November 1, 2014

### **D15. SUBSTANTIAL PERFORMANCE**

D15.1 The Contractor shall achieve Substantial Performance within thirty (30) consecutive Working Days of the commencement of the Work as specified in D13.

D15.2 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. The Substantial Performance shall be considered met when the dyke is reshaped and the retaining blocks in place as per design drawings. The above does not include final preparation like drain rock, topsoil and seed. 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.

D15.3 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.

#### **D16. TOTAL PERFORMANCE**

D16.1 The Contractor shall achieve Total Performance within sixty (60) consecutive Working Days of the commencement of the Work as specified in D13.

D16.2 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. The Total Performance shall include all the bid items as specified in Form B, except the work to be completed by homeowners, which include tree cuttings, seeds placement and topsoil leveling as specified in E2. 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.

D16.3 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.

#### **D17. LIQUIDATED DAMAGES**

D17.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the City One hundred dollars (\$100.00) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.

D17.2 The amount specified for liquidated damages in D17.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.

D17.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

#### **CONTROL OF WORK**

##### **D18. JOB MEETINGS**

D18.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.

D18.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

##### **D19. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

D19.1 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).



## **D20. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS**

- D20.1 Further to B11.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B11.4.

## **MEASUREMENT AND PAYMENT**

### **D21. INVOICES**

- D21.1 Further to C12, the Contractor shall submit an invoice for each portion of Work performed. 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)

- D21.2 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 work performed;
- (e) the amount payable with GST and MRST shown as separate amounts; and
- (f) the Contractor's GST registration number.

- D21.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

- D21.4 Bids Submissions must be submitted to the address in B8.5.

### **D22. PAYMENT**

- D22.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

### **D23. PAYMENT SCHEDULE**

- D23.1 Further to C12, payment shall be in accordance with the following payment schedule:
- (a) Full payment upon completion except where noted herein.

## **WARRANTY**

### **D24. WARRANTY**

- D24.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

- D24.1.1 For the purpose of Performance Security, the warranty period shall be one (1) year.

- D24.2 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.

- D24.2.1 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 D10)

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. 710-2014

1046 DES TRAPPISTES STREET – FLOOD PROTECTION WORKS,  
WINNIPEG, MANITOBA

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 D10)

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

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 710-2014

CONTRACT NAME: 1046 DES TRAPPISTES STREET- FLOOD PROTECTION WORKS, WINNIPEG, MB

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

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

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

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

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

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

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

Partial drawings are permitted.

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

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

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

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

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

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

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

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

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

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

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

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

**FORM I: DETAILED WORK SCHEDULE**  
 (See D12)  
 1046 DES TRAPPISTES STREET – FLOOD PROTECTION WORKS,  
 WINNIPEG, MANITOBA

For each item of Work, indicate the cumulative percentage proposed to be completed by the end of each time period until 100% completion is achieved.						
Items of Work	Time Period in Working Days					
	0	10	20	30	40	50
Mob-Demobilization and Site Preparation						
Supply and Installation of Retaining Walls (Rosetta™ Stone Blocks)						
Relocate Existing Earth Mound Dyke and Sand Bags						
Supply and Place Additional Clay for Dyke						
Supply and Installation of Rosetta™ Steps						
Site Grading, Construction of Pond and Site Clean-up						
Supply Topsoil and Seeds						

## 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*.

#### E2. SUPPLEMENTAL WORKS BY HOMEOWNER

The items listed below are required for the completion of the project; however they are not included in this tender package as they will be the responsibility of the homeowner.

- Tree Cutting at Predetermined Locations near the Proposed Dyke; and
- Seeds Placement and Topsoil Leveling.

#### E3. DRAWINGS

The following drawings are applicable and form part of the work required by the Contractor:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
710-2014_Drawing_1-R0	Site Plan and Photograph Index
710-2014_Drawing_2-R0	Dyke Plan View and Drainage
710-2014_Drawing_3-R0	Wall Front Profile and Typical Section
710-2014_Drawing_4-R0	Photographs 1-9
710-2014_Drawing_5-R0	Rosetta™ Stone Blocks Pattern Profile

#### E4. MOB-DEMobilIZATION AND SITE PREPARATION

##### Description

- E4.1 This specification shall cover the work required under the heading Mob-Demobilization and Site Preparation, as shown in Form B: Schedule of Unit Prices, and shall include all equipment mobilization and demobilization, access development, trimming branches, protecting trees and acquire any other incidental items required to prepare the site for the work.
- E4.2 The work to be done by the Contractor under this specification shall include superintendence, labour, materials, and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

##### Construction Methods

##### Site Access

- E4.3 The location of access is to be by way of the space between the existing house and the trees on the west side of the property at 1046 Rue Des Trappistes, Winnipeg, MB. Other access points may be used upon approval from the Contract Administrator. Care must be given to ensure no



damage occurs to the house, garage, driveway, trees and any other item not requiring adjustment. The Contractor will be held liable for damage and shall be required to provide appropriate restoration to the satisfaction of the Contract Administrator, unless written permission for damage has been granted by the Contract Administrator.

### Tree Removal and Protection

- E4.4 8 to 12 predetermined trees will be removed by the homeowner prior to starting the proposed works as shown in Drawing No. 2, and some pruning of branches on the other trees in the area of operation may be required and will be assessed at the time of construction. Protecting of other trees near the zone of the work area, using wooden slats tied around the tree trunk to fully protect the tree, will be required on all trees in the work area if there is a potential for damage. The contractor will be responsible if damage occurs to living trees.
- E4.5 The Contractor will be held liable for excessive damage to items such as the building and live trees, and shall be required to provide appropriate restoration to the satisfaction of the Contract Administrator, unless written permission has been granted by the Contract Administrator.

## **E5. SUPPLY AND INSTALLTION OF RETAINING WALLS (ROSETTACH™ STONE BLOCKS)**

### **Description**

- E5.1 This Specification shall cover the work required under the heading Supply and Installation of Retaining Walls (Rosetta™ Stone Blocks) as shown in Form B: Schedule of Unit Prices, and shall include the supply and installation of the retaining walls, engineered fills, and system, and geotextile and all other incidental items related to the Rosetta retaining walls.
- E5.2 The work to be done by the Contractor shall include superintendence, labor, materials, and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

### **Materials**

#### General

- E5.3 The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification required to complete the work.
- E5.4 The bottom row of blocks must have a minimum of 150 mm of soil cover at the base of the wall on the dry side, and placed as shown on the drawings, and in accordance with manufacturers recommendations.

#### Engineered Fills

- E5.5 The sub-grade is to be compacted to a minimum 95% Maximum Dry Density (MDD) prior to placement of base. If any soft spots, such as silty or sandy soils are encountered, it shall be removed and backfilled with medium to highly plastic clay placement in a maximum of 300 mm thick lifts and compacted to 95% MDD. The base is to be 150 mm of 19 mm limestone (Course base) and compacted to 100% MDD as shown on the drawings.
- E5.6 Granular rock fill placed behind the retaining walls shall be 20 mm clean limestone. The rock fill is to be compacted to 90% MDD and wrapped in geotextile (Geotex NW-801 or equivalent in accordance with B7) as shown in Drawing No. 3.

#### Rosetta™ Stone Blocks

- E5.7 The retaining walls as shown in Drawing Nos. 2 and 3, shall consist of Rosetta™ stone blocks. The total square face area of the Rosetta™ stone required is approximately 70 m<sup>2</sup>. The Rosetta™ stone block dimensions vary.

Rosetta™ stone blocks are to be installed using the manufacturers' recommendations. The patterns for the blocks are outlined in Drawing No 5. The colour will be Fon du lac.

### **Construction Methods**

- E5.8 The construction of the retaining walls and all other components shall have the shape and dimensions as shown on the drawings in Drawings, and final approval of the above will be provided by the Contract Administrator. The retaining wall elevation shall be within " 0.01 m; minor field adjustments to the location of the retaining walls maybe required and approval must be obtained by the Contract Administrator prior to construction.

### **Quality Control**

- E5.9 All workmanship and materials furnished and supplied under this Specification will be subject to inspection by the Contract Administrator, including all operations from the selection and production of materials through the final acceptance of the specific work. The Contractor shall be responsible for the control of all operations to complete the work, except the inspections or approvals that have been previously given.
- E5.10 The Contract Administrator shall have full access for inspection and control of testing of materials at the site to determine whether the materials are being selected and placed or work being conducted in accordance with this Specification.

## **E6. RELOCATE EXISTING EARTH MOUND DYKE AND SAND BAGS**

### **Description**

- E6.1 This specification shall cover the work required under the heading Relocate Existing Dyke and Sand Bags as shown in Form B: Schedule of Unit Prices, and shall include relocate approximately 280 m<sup>3</sup> of existing clay dyke on site for forming and shaping the dyke to meet the design shown in Drawing Nos. 2 and 3. The dyke side slopes are to be cut and shaped as shown on the drawings.
- E6.2 The work to be done by the Contractor under this specification shall include superintendence, labor, materials, and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

### **Construction Methods**

#### *Construction of Existing Dyke and Sand Bags Replacement*

- E6.3 The earth mound was previously constructed using clay hauled on to the property, and was shaped to form the base of the earthen mound dyke. The earthen mound dyke will be reshaped, and extend the dyke as shown on drawings Drawing Nos. 2 and 3, including replacement of existing sand bags to the lower lying area for positive drains to the river as shown on Drawing No. 2. Prior to relocate the existing dyke, all the organic material and topsoil must be removed from the area of the proposed clay dyke, and placement of existing clay fill in maximum 300 mm thick lifts and compacted to 95% of the maximum dry density (M.D.D).
- E6.4 Care must be taken when placing clay adjacent the house, trees, and/or any other items. The Contractor will be held liable for damage to the aforementioned items, and shall be required to provide appropriate restoration to the satisfaction of the Contract Administrator.

### **Quality Control**

- E6.5 All workmanship and materials furnished and supplied under this Specification will be subject to inspection by the Contract Administrator, including all operations through the final acceptance of the specific work. The Contractor shall be responsible for the control of all operations to complete the work, except the inspections or approvals that have been previously given.

## **E7. SUPPLY AND PLACEMENT OF ADDITIONAL CALY FILL FOR DYKE**

### **Description**

- E7.1 This specification shall cover the work required under the heading Supply and Placement of Additional Clay Fill for Dyke as shown in Form B: Schedule of Unit Prices, and shall include supply and placement of approximately 80 m<sup>3</sup> of medium to high plastic clay for the forming and shaping of the clay dyke to meet the dyke design shown in Drawing Nos. 2 and 3. The dyke side slopes are to be cut and shaped as shown on the drawings. The amount of clay needed will depend on the final shape and if more sandy soils are encountered during construction.
- E7.2 The work to be done by the Contractor under this specification shall include superintendence, labor, materials, and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

### **Materials**

#### Clay Fill

- E7.3 The Contractor shall be responsible for the placement and compaction of medium to highly plastic clay fill to elevation 231.75 m, and extend the dyke as shown on drawings Drawing Nos. 2 and 3. Care must be taken when placing clay adjacent the house, trees, and/or any other items. The Contractor will be held liable for damage to the aforementioned items, and shall be required to provide appropriate restoration to the satisfaction of the Contract Administrator.

### **Construction Methods**

- E7.4 The amount of clay placed for the clay dyke shall be performed in such a manner as to ensure bonding of the clay layers using a sheep's foot roller or equivalent in accordance with B7, and must be uniformly compacted in maximum 300 mm thick lifts in order to sufficiently meet the shape and dimensions of the clay dyke as shown in Drawing Nos. 2 and 3. The final approval of the above will be provided by the Contract Administrator. Final elevations shall be within " 0.01 m.

### **Quality Control**

- E7.5 All workmanship under this Specification will be subject to inspection by the Contract Administrator, including all operations through the final acceptance of the specific work. The Contractor shall be responsible for the control of all operations to complete the work, except the inspections or approvals that have been previously given.
- E7.6 The Contract Administrator shall have full access for inspection and control of testing of materials at the site to determine whether the materials are being selected and placed or work being conducted in accordance with this Specification.

## **E8. SUPPLY AND INSTALLATION OF ROSETTA™ STEPS**

### **Description**

- E8.1 This Specification shall cover the work required under the heading Supply and Installation of Rosetta™ Steps as shown in Form B: Schedule of Unit Prices, and shall include the supply and installation of the steps, engineered fills, and system, and all other incidental items related to the Rosetta steps.
- E8.2 The work to be done by the Contractor shall include superintendence, labor, materials, and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

## **Materials**

### General

- E8.3 The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification required to complete the work.

### Engineered Fills

- E8.4 The sub-grade is to be compacted to a minimum 95% MDD prior to placement of base. If any soft spots, such as silty or sandy soils are encountered, it shall be removed and backfilled with medium to highly plastic clay and compacted to 95% MDD. The base is to be 150 mm of 19 mm limestone (Course base) and compacted to 100% MDD.

### Steps

- E8.5 The steps located as shown in Drawing No. 2, shall consist of six (6) rows of Rosetta™ stone 178 mm rise steps. The Rosetta™ stone step dimensions vary. The colour will be selected by the homeowner prior to project initiation.

Rosetta™ stone steps are to be installed using the manufacturers' recommendations. Some sample patterns are outlined in Rosetta™ Design Resource Manual, which can be obtained from Barkman Concrete.

## **Construction Methods**

- E8.6 The construction of the steps will be field fit with the shape and dimensions satisfying the final grade as shown on the drawings in Drawing No. 2, and final approval of the above will be provided by the Contract Administrator. The steps elevation shall be within " 0.01 m; minor field adjustments to the location of the steps maybe required and approval must be obtained by the Contract Administrator prior to construction.

## **Quality Control**

- E8.7 All workmanship and materials furnished and supplied under this Specification will be subject to inspection by the Contract Administrator, including all operations from the selection and production of materials through the final acceptance of the specific work. The Contractor shall be responsible for the control of all operations to complete the work, except the inspections or approvals that have been previously given.
- E8.8 The Contract Administrator shall have full access for inspection and control of testing of materials at the site to determine whether the materials are being selected and placed or work being conducted is in accordance with this Specification.

## **E9. SITE GRADING, CONSTRUCTION OF POND AND SITE CLEAN-UP**

### **Description**

- E9.1 This specification shall cover the work required under the heading Site Grading, Construction of Stone Pond and Site Clean-up as shown in Form B: Schedule of Unit Prices, and shall include Site Grading, Construction of Stone Pond and Site Clean-up.
- E9.2 The work to be done by the Contractor under this specification shall include superintendence, labor, materials, and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

### Site Grading

- E9.3 Site grading shall include work required to final shape, size of the dyke surrounding the house, and the remaining land in order to induce positive drainage towards the pond as shown Drawing No.2. All clay used must be classified as medium to highly plastic.

### Stumps Removal

- E9.4 8 to 12 stumps between the house to the existing dyke shall be removed prior to the pond construction. The average diameter of the stumps are +/- 0.3 m.

### Construction of Pond

- E9.5 Construction of Pond shall include excavation of clay fill in the area of proposed pond and placement of blocks / stones along the perimeter of the pond with geotextile underneath as shown in Drawing Nos. 2 and 3. The size of the pond will be field fit as per homeowner's request, and is expected to be 8.5 m<sup>2</sup> in plan.

### Site Clean-up

- E9.6 Upon completion of the construction of the retaining walls, clay dyke, site grading and stone pond, all disturbed areas must be leveled and ready to be covered with topsoil and seeds as specified in E11.

## **Materials**

### General

- E9.7 The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification required to complete the work.

### Geomembrane

- E9.8 The geomembrane shall be 30 mil low linear polyethylene and shall be placed at the locations shown on the drawings.

### Blocks / Stones

- E9.9 The stone pond shall consist of blocks / stones along the edge of the excavation and will be used to retain part of the soils for the pond at the locations shown on the drawings. The blocks / stones will be provided by the homeowner.

## **Construction Methods**

- E9.10 The site shall be restored as best as possible to the original condition, and deemed acceptable to the Contract Administrator.

## **E10. SUPPLY TOPSOIL AND SEEDS**

### **Description**

- E10.1 This specification shall cover the work required under the heading Supply Topsoil and Seeds as shown in Form B: Schedule of Unit Prices, and shall include the supply and placement of 50 mm of topsoil over the entire work area upon completion of the site work. The site will require 25 m<sup>3</sup> of topsoil to cover the area surrounding the house and the footprint of the clay dyke. The Contractor will be required to place and smooth out the topsoil in selected areas and complete a general site grading of the topsoil. The homeowner will be responsible for the placement of 35 kg of seeds and final leveling.

E10.2 The work to be done by the Contractor under this specification shall include superintendence, labour, materials, and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.