



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 537-2007**

**HARBOUR VIEW RECREATION COMPLEX PLAYGROUND RENEWAL**

## TABLE OF CONTENTS

### PART A - BID SUBMISSION

Form A: Bid	1
Form B: Prices	4
Form G1: Bid Bond and Agreement to Bond	6
Form G2: Irrevocable Standby Letter of Credit and Undertaking	8

### PART B - BIDDING PROCEDURES

B1. Contract Title	1
B2. Submission Deadline	1
B3. Site Investigation	1
B4. Enquiries	1
B5. Addenda	1
B6. Substitutes	2
B7. Bid Components	2
B8. Bid	3
B9. Prices	4
B10. Qualification	4
B11. Bid Security	5
B12. Opening of Bids and Release of Information	6
B13. Irrevocable Bid	6
B14. Withdrawal of Bids	6
B15. Evaluation of Bids	7
B16. Award of Contract	7

### PART C - GENERAL CONDITIONS

C0. General Conditions	1
------------------------	---

### PART D - SUPPLEMENTAL CONDITIONS

#### General

D1. General Conditions	1
D2. Scope of Work	1
D3. Contract Administrator	1
D4. Contractor's Supervisor	2
D5. Notices	2
D6. Furnishing of Documents	2

#### Submissions

D7. Authority to Carry on Business	3
D8. Safe Work Plan	3
D9. Insurance	3
D10. Performance Security	3
D11. Subcontractor List	4
D12. Detailed Work Schedule	4

#### Schedule of Work

D13. Commencement	4
D14. Working Days	5
D15. Substantial Performance	5
D16. Total Performance	5
D17. Liquidated Damages	5
D18. Scheduled Maintenance	6

#### Control of Work

D19. Job Meetings	6
D20. Prime Contractor – The Workplace Safety and Health Act (Manitoba)	6

#### Measurement and Payment

D21. Payment	6
--------------	---

Form H1: Performance Bond	7
Form H2: Irrevocable Standby Letter of Credit	9
Form J: Subcontractor List	11

## **PART E - SPECIFICATIONS**

### **General**

E1. Applicable Specifications and Drawings	1
--	---

### **General Requirements**

E2. Protection of Existing Trees	1
E3. Protection of Survey Infrastructure	2
E4. Stakes and Marks	2
E5. Water Used By Contractor	3
E6. Surface Restorations	3
E7. Temporary Relocation of Affected Structures	3
E8. Truck Weight Limits	3
E9. Access	3
E10. Site Condition	4
E11. Existing Underground Services	4
E12. Product Approvals	5
E13. Damage to Streets and Structures	5
E14. Permits, Notices, Licences, Certifications, Laws, and Rules	5
E15. Excavation, Removals, subgrade Compaction and Rough Grading	5
E16. Sawcutting Pavement	8
E17. Matching Existing Grades	8
E18. Base Course Material	8
E19. Asphalt Pathway	9
E20. Wood Bollard	10
E21. Landscape Rock	10
E22. Play Equipment	11
E23. Recycled Rubber Chip Playground Surfacing	16
E24. Playground Tiles	17
E25. Wood Decking	21
E26. Site Furniture	23
E27. Irrigation	24
E28. Sodding	24
E29. Play Sand	25

## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 HARBOUR VIEW RECREATION COMPLEX PLAYGROUND RENEWAL

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, August 10, 2007.

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.

### **B4. ENQUIRIES**

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

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

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

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

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

### **B5. ADDENDA**

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

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

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

B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet site for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 9 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 B15.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

## **B7. BID COMPONENTS**

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices;

- (c) Form G1: Bid Bond and Agreement to Bond, or  
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or  
a certified cheque or draft;
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.
- B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, may result in the Bid being determined to be non-responsive.
- B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.8 Bids shall be submitted to:  
The City of Winnipeg  
Corporate Finance Department  
Materials Management Branch  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1
- B8. BID**
- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
  - (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
  - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
  - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
  - (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 11 of Form A: Bid shall be signed in accordance with the following requirements:
  - (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;

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

B8.4.1 The name and official capacity of all individuals signing Form A: Bid shall be printed below such signatures.

B8.4.2 All signatures should be witnessed, except where a corporate seal has been affixed.

B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B9.1.1 Notwithstanding C12.2.3(c), prices on Form B: Prices shall not include the Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.

B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

## **B10. QUALIFICATION**

B10.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; 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 Branch internet site at <http://www.winnipeg.ca/matmgt>).

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 three (3) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a Workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
  - (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt.>)
- B10.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.
- B10.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

## **B11. BID SECURITY**

- B11.1 The Bidder shall provide bid security in the form of:
- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
  - (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
  - (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.
- B11.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.
- B11.1.2 All signatures on bid securities shall be original, and shall be witnessed or sealed as required.
- B11.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.
- B11.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B11.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.
- B11.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.
- B11.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

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

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

B12.1.1 Bidders or their representatives may attend.

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

B12.2 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 Branch internet site at <http://www.winnipeg.ca/matmgt>.

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

B12.4 The Bidder is advised that any information contained in any Bid 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 10 of Form A: Bid.

B13.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 10 of Form A: Bid.

## **B14. WITHDRAWAL OF BIDS**

B14.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B14.1.1 Notwithstanding 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 11 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 11 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.

B14.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B13.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative

Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

## **B15. EVALUATION OF BIDS**

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

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

B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid 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 Bid or in other information required to be submitted, that he is responsible and qualified.

B15.4 Further to B15.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices 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(g) in the order listed, until a Total Bid Price within the budgetary provision is achieved.

B15.4.1 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.

## **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** Subject to B16.2, 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.

**B16.3.1** Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.

## **PART C - GENERAL CONDITIONS**

### **C0. GENERAL CONDITIONS**

- C0.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- 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 removal and replacement of the existing play structure, bases and safety surfaces, supply and installation of asphalt pathway, removal and reinstallation of rock boulders, supply and installation of new rock boulders, supply and installation of wood deck, supply and installation of irrigation system, and supply and installation of sod. .

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

- (a) Remove existing playstructure and concrete bases;
- (b) Sawcut, excavation, remove and dispose of asphalt paving and unsuitable base courses;
- (c) Remove, salvage and reinstall existing wood wall;
- (d) Excavation, removals, and rough grading including removal and disposal of existing sand surfacing;
- (e) Remove, salvage and reinstall rock boulders;
- (f) Supply and install asphalt pathway including excavation, rough grading, base courses and compaction;
- (g) Supply and install Sof-Surface safety tiling;
- (h) Supply and install Perma Life safety surfacing;
- (i) Supply and install play sand including excavation, removals and rough grading;
- (j) Supply and install troller ship play structure;
- (k) Supply and install lighthouse and rock play structure;
- (l) Supply and install swing set with cargo bridge panel;
- (m) Supply and install timber ship play structure;
- (n) Supply and install ship mast swing set;
- (o) Supply and install flying fish spring rider;
- (p) Supply and install accessible sway fun sail boat structure;
- (q) Supply and install townscape play panels;
- (r) Supply and install flag pole with 'Kilcona Harbour' permalene flag;
- (s) Supply and install wood pier and ramps;
- (t) Supply and install custom Tache style recycled plastic timber backless bench with armrests;
- (u) Supply and install rock boulders;
- (v) Supply and install irrigation system for beach area; and
- (w) Supply and install topsoil and sod.

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

D3.1 The Contract Administrator is McGowan Russell Group, represented by:

Mr. Aaron Hirota  
Landscape Architect  
200-120 Fort St. Winnipeg, MB. R3C 1C7

Telephone No. (204) 956-0396

Facsimile No. (204) 956-1265

- D3.2 At the pre-construction meeting, Mr. Hirota 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 All notices of appeal to the Chief Administrative Officer shall be sent to the following address or facsimile number:  
  
The City of Winnipeg  
Chief Administrative Officer Secretariat  
Attn: Chief Administrative Officer  
Administration Building, 3rd Floor  
510 Main Street  
Winnipeg MB R3B 1B9  
Facsimile No.: (204) 949-1174
- D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:  
  
The City of Winnipeg  
Corporate Services Department  
Legal Services Division  
Attn: City Solicitor  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

**D6. FURNISHING OF DOCUMENTS**

- D6.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him at cost.

## **SUBMISSIONS**

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

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

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

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

D8.2 The Safe Work Plan 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 Branch internet site at <http://www.winnipeg.ca/matmgt>.

### **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) 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;

D9.2 Deductibles shall be borne by the Contractor.

D9.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract.

D9.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

### **D10. PERFORMANCE SECURITY**

D10.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:

- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
- (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or

- (c) a certified cheque or draft payable to “The City of Winnipeg”, drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.

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

D10.2 If the bid security provided in his Bid was not a certified cheque or draft pursuant to B11.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

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

D11.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at 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.

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

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

D12.2 The detailed Work schedule shall consist of the following:

- (a) a Gantt chart for the Work based on the C.P.M. schedule;  
all acceptable to the Contract Administrator.

D12.3 Further to D12.2(a), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.

#### **SCHEDULE OF WORK**

##### **D13. COMMENCEMENT**

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

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

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

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

**D14. WORKING DAYS**

- D14.1 Further to C1.1(gg), the Contract Administrator's determination of whether or not atmospheric and Site conditions are such that a Working Day is deemed to have elapsed may be based at one time on one type of Work while at another time a Working Day may be based on another type of Work. When more than one type of major Work is involved, the quantity of equipment that must be able to Work in order to meet the requirements of a Working Day may vary considerably from that specified in the General Conditions.
- D14.2 In the event that incidental Work is behind schedule which, in the opinion of the Contract Administrator, should have been or could have been carried out by the Contractor in conjunction with or immediately following Work of a major type, the City hereby reserves the right to charge Working Days on the incidental Work until such time as it is up to schedule.
- D14.3 When the major type of Work involves restoration of the site to the condition it was prior to rainfall, Working Days shall not be charged.

**D15. SUBSTANTIAL PERFORMANCE**

- D15.1 The Contractor shall achieve Substantial Performance by September 28, 2007.
- 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. 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 by October 5, 2007.
- 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. 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 Total Performance, the Contractor shall pay the City Two Hundred and Fifty dollars (\$250.00) per Working Day for each and every Working Day following the day fixed herein for Total 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 Total 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.

## **D18. SCHEDULED MAINTENANCE**

D18.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

(a) Topsoil and Sod as specified in E28;

D18.2 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**

### **D19. JOB MEETINGS**

D19.1 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.

D19.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

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

D20.1 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**

### **D21. PAYMENT**

D21.1 Further to C12, effective January 1, 2007 the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

**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 dated the

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

BID OPPORTUNITY NO. 537-2007

HARBOUR VIEW RECREATION COMPLEX PLAYGROUND RENEWAL

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

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

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

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

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

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

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

SIGNED AND SEALED  
in the presence of:

\_\_\_\_\_  
(Witness)

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

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

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

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

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT  
(PERFORMANCE SECURITY)**  
(See D10)

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

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 537-2007

HARBOUR VIEW RECREATION COMPLEX PLAYGROUND RENEWAL

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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- 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	Layout Plan
L2	Play Structure Layout Plan
L3	Grading Plan
L4	Details

### GENERAL REQUIREMENTS

#### E2. PROTECTION OF EXISTING TREES

- E2.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities.
- All trees will have a 3m radius protective zone calculated from the circumference at the base of the trunk which will remain free of digging, trenching, grade changes, stock piling of materials and soil compaction, except as minimum to construct swales, throughout the duration of the Contract. Protective fencing around these areas is required.
  - Trees within and immediately adjacent to proposed construction areas and those identified to be at risk by the Contract Administrator, will require 25 x 100 x 2400mm wood planks strapped to the tree trunk to completely protect the tree trunk from impact damage. (Smaller trees will be similarly protected using proportionally sized wood planks.)
  - Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 3m from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation. They must be properly trimmed with sharp tools to prevent crushing or being pulled up by construction equipment. No paint is required. All exposed roots must be mulched until the excavated area is filled with clean earth to avoid exposure to sunlight and desiccation.
  - Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the Work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
  - Work on-Site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.

- E2.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his designate.
- E2.3 No separate measurement or payment will be made for the protection of trees.
- E2.4 Auguring under existing trees will be the only acceptable method of underground installations. Any other excavations must be approved by the Forestry Branch.

### **E3. PROTECTION OF SURVEY INFRASTRUCTURE**

- E3.1 Notwithstanding clause 4 "Protection of Survey Bars" of the Standard Provisions: Current legislation, The Surveys Act, places the onus on those undertaking construction to protect the Survey Infrastructure from damage as a result of their activity.
- E3.2 Further to GC:6.28 (g), at least 72 hours prior to the commencement of the On-Site Work the Contractor shall contact the City of Winnipeg, Geomatics Services Branch at 986-4826 (8:00 am to 4:00 pm Monday to Friday excluding holidays) to obtain underground clearance. Geomatics Services will locate and mark all known outline survey monuments and geodetic control monuments and confirm the physical condition of those monuments upon completion of construction, at no cost to the Contractor.
- E3.3 Where a survey post, bar or control monument lies in the line of the proposed Work and must be disturbed, the Contractor shall provide the Contract Administrator with 48 hours notice to permit referencing for future replacement, at no cost to the Contractor. Failure to provide the specified notice shall result in the Contractor paying for all costs associated with replacing or relocating the disturbed outline survey monuments and geodetic control monuments.
- E3.4 Survey monuments and geodetic control monuments at or adjacent to the Site, not in the line of the proposed construction, that are damaged or disturbed by the Contractor shall be replaced or relocated by the City or its agent and all associated costs shall be paid for by the Contractor. An approximate estimate of the costs involved to restore a legal survey monument is \$1,000 per bar and \$3,000 per control monument. Contractors must ensure their landscaping and other subcontractors are aware of this clearance procedure and the potential restoration costs.
- E3.5 Where possible, amounts owed to the City in accordance with the above will be deducted from any Protection of survey infrastructure payments to be made by the City to the Contractor.

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

- E4.1 Further to GC:6.28(h), the Contractor will mark, to the extent he determines to be necessary, the location, alignment and elevation of the Work by means of stakes or marks, for review and approval by Contract Administrator. The Contractor shall make the completed Works conform to the lines and marks thus approved and indicated.
- E4.2 The Contractor shall notify the Contract Administrator immediately of the disturbance of any such stakes or marks. The cost of correcting any errors arising out of neglect of the Contractor to so notify the Contract Administrator shall be borne entirely by the Contractor, as well as the cost of replacing any disturbed stakes or marks.
- E4.3 Before commencing Work, the Contractor shall satisfy himself as to the meaning and correctness of all stakes and marks and no claims shall be entertained by the City on account of any alleged inaccuracies. If any error is suspected in the Drawings, Specifications or the directions of the Contract Administrator, Work shall be discontinued until the errors are rectified, but no claims shall be made on account of any delay occasioned thereby.
- E4.4 The Contractor shall determine and provide all dimensions and elevations measured from the stakes or marks

## **E5. WATER USED BY CONTRACTOR**

E5.1 Notwithstanding CW 1120.3.7:

E5.1.1 Water for use by the Contractor may be obtained from the City of Winnipeg waterWorks system.

E5.1.2 Should the Contractor wish to obtain water from a City hydrant, he shall make application either in person or by phoning the Permits Clerk at 986-3184 (8:30 am to 4:30 pm Monday to Friday excluding holidays). The Contractor shall advise the Permits Clerk of the hydrant he wishes to use. The Water Services Divisions of the Water and Waste Department will inspect the hydrant to ensure that the location is suitable and that the hydrant is in good Working condition. If the requested hydrant is found to be unacceptable, arrangements will be made for the use of an alternate hydrant.

E5.1.3 When the application has been approved, the Permits Clerk will contact the Contractor and issue the permit. The permit may not be issued the same day the application is made. The Contractor shall obtain the permit for hydrant use from the Customer Services Division of the Public Works Department, 107-1155 Pacific Avenue. Permit fees will be charged in accordance with the latest version of the WaterWorks By-law. All water used shall be metered and protected against contamination by the use of approved backflow prevention devices. The City will rent the meter to the Contractor at the rate established by the WaterWorks By-law. The Contractor shall provide a lockable box, piping, valves, and backflow prevention equipment in accordance with WaterWork's guidelines. The backflow preventer(s) must be tested by a plumber licensed to test backflow preventers. The Permits Clerk can provide a list of licensed plumbers and additional information on the requirements for obtaining a use of hydrant permit.

E5.1.4 The Contractor shall pay for all water used in accordance with the WaterWorks By-law. Sewer charges will not be assessed for water obtained from a hydrant.

## **E6. SURFACE RESTORATIONS**

E6.1 The Contractor shall temporarily repair any Work commenced and not completed in the 2007 construction season to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator until permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

## **E7. TEMPORARY RELOCATION OF AFFECTED STRUCTURES**

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

## **E8. TRUCK WEIGHT LIMITS**

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

## **E9. ACCESS**

E9.1 All access is to be on the designated routes through the Site. These routes will be determined at the Pre-Construction Meeting.

- E9.2 Access to the Site as required by the Contractor shall be provided and maintained by the Contractor at his own expense and approved by the Contract Administrator.
- E9.3 The Contractor's operations shall be limited to the minimum area necessary for undertaking the Work and he shall be responsible for all damage resulting from his Work on private property. The Contractor shall take such measures as are necessary to ensure safe and convenient pedestrian ingress and egress in maintained to private properties while he is Working near them. Any damage caused by the negligence of the Contractor or his Sub-Contractors to the adjacent Works or properties, shall be promptly repaired by him at his own expense, to the satisfaction of the Contract Administrator.
- E9.4 All necessary precautions shall be exercised by the Contractor so as not to remove, disturb, or damage any existing trees, shrubs, sod, pavements, streets, roads, boulevards, poles, hydrants, water pipes, gas pipes, electrical wires, cables, conduits, sewers or other existing facilities and equipment at the Site of the Work. For all damage incurred in the performance of the Work (either directly or indirectly), the Contractor shall either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to, the Contract Administrator and the cost of which shall be borne entirely by the Contractor.
- E10. SITE CONDITION**
- E10.1 The Contractor shall examine the Site and make themselves familiar with the existing conditions (both above and below grade) and nature of Work to be done.
- E10.2 Surface and sub-surface conditions shown on the Drawings and included herein are provided for general information and variations there from shall not affect the terms of the Contract.
- E10.3 The Contractor shall set all necessary control lines, benchmarks, survey, elevation stakes and layout in accordance with the individual Site conditions and in consultation with the Contract Administrator.
- E11. EXISTING UNDERGROUND SERVICES**
- E11.1 The Contractor's attention is drawn to the existing underground lines or services that may be located in the area of the Work.
- E11.2 The Contractor shall take all necessary precautions when performing the Work to ensure that no damage is done to these existing services.
- E11.3 No responsibility will be assumed by the City for correctness or completeness of the Drawings, when provided, with respect to the existing utilities, pipes or other objects either underground or on the surface, shall not be liable for the incorrectness and inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of all such utilities, pipes and other objects and to make good any damage done to them.
- E11.4 All costs in connection with this item including location of the existing service, repairs to any existing services damaged by the construction operation, etc. shall be included in the unit prices bid for supply and installation of the items included under this Contract.
- E11.5 The Contractor will be required to make his own arrangements in connection with the temporary use of lighting, power, gas, sewer, water or other utilities, and pay all costs in connection therewith.
- E11.6 All necessary permits, fees and other like expenses as well as the cost of temporary connections to existing facilities shall be arranged and paid for by the Contractor.

## **E12. PRODUCT APPROVALS**

- E12.1 The Contractor shall, following award, prepare a complete list of all material to be used on the project and submit the list to the Contract Administrator seventy two (72) hours prior to start of construction.
- E12.2 The Contractor shall only use material which has been approved by Specification CW3710-R1 or by the Contract Administrator. The list shall provide the product, the manufacturer and the supplier.
- E12.3 Other than required to be done by the Contractor under the Work of this contract, all necessary precautions shall be exercised by the Contractor so as not to remove, disturb, or damage any existing plant material, pavements, streets, roads, boulevard, poles, hydrants, water pipes, gas pipes, electrical wires, cables, conduits, sewers or other existing facilities and equipment at the Site of the Work. For all damage incurred thereto in the performance of the Work, the Contractor shall upon instructions from the Contractor Administrator, either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to the Contract Administrator and the costs of which shall be borne entirely by the Contractor.
- E12.4 All Workmanship and materials furnished and supplied under this Specification are subject to close and systematic inspection and testing by the Contract Administrator. The Contract Administrator reserves the right to reject any materials or Works which are not in accordance with the requirements of the Specifications.
- E12.5 The Contractor shall wholly be responsible for the supply, safe storage, and handling of all materials set forth in this specification, and the control of all operations incidental thereto notwithstanding any inspection or approval that may have been previously given.

## **E13. DAMAGE TO STREETS AND STRUCTURES**

- E13.1 The Contractor is to be advised of the following existing Site features to be retained and protected to the City of Winnipeg Standards:
- |                    |                             |                |
|--------------------|-----------------------------|----------------|
| a) trees           | e) light standards          | i) hydro poles |
| b) asphalt pathway | f) fire hydrants            | j) fences      |
| c) sidewalk        | g) culverts                 |                |
| d) sod             | h) all underground services |                |

## **E14. PERMITS, NOTICES, LICENCES, CERTIFICATIONS, LAWS, AND RULES**

- E14.1 The Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the Work may be carried out. The Contractor shall submit all plans required by any inspection authority and obtain approval of same before proceeding with the Work, and pay any cost attached to the inspection of such plans.
- E14.2 The Site Development Permits (including lot grading and damage deposits) will be obtained and paid for by the City of Winnipeg Planning, Property and Development Department prior to commencement of construction. A copy of this permit will be provided to the Contractor upon award of Contract.
- E14.3 The Contractor shall comply with all laws, ordinances, rules, and regulations that would relate to the Works.

## **E15. EXCAVATION, REMOVALS, SUBGRADE COMPACTION AND ROUGH GRADING**

- E15.1 General
- E15.1.1 This specification is supplemental to CW 3110 and CW 3170. The Work of this section comprises the furnishing of all labour, equipment and materials required to complete the excavation and related Work including, but not necessarily confined to, the following:

- (a) Excavation, removals, disposal, subgrade compaction and rough grading of the existing Site for the construction of asphalt pathways, sodded areas, and play spaces to the design requirements noted on the Drawings, approved on Site by the Contract Administrator, to depths as required for each surface.
- (b) Stockpile suitable, approved material on Site for reuse (clean topsoil, clean earth fill, gravel fill and rock boulders) in a secure location. Remove and dispose of unsuitable material.
- (c) EarthWork and Grading of the existing Site (cut and fill including compaction of subgrade and fill material) to ensure positive drainage in all paved areas, swales and adjacent sodded areas.
- (d) Supply and install imported fill in areas as required to ensure positive drainage.
- (e) Excavate and remove all sand from play areas.
- (f) Remove and dispose of existing play equipment and concrete bases as per the drawings.
- (g) Remove, stockpile and reinstall wood bollards

## E15.2 Materials

E15.2.1 All fill materials shall conform to CW 3170

## E15.3 Construction Methods

- E15.3.1 The Contractor shall construct the Site within the limits indicated to the design elevations and gradients noted on the Drawings, less the appropriate surface treatment depths specified and shall excavate, remove and dispose of all unsuitable materials of whatever nature encountered.
- E15.3.2 The Contractor shall construct all sub-grades in accordance with Specification CW 3110. Excavation will be performed as per Item 9.1 of CW 3110. The Contractor shall remove existing pavement in accordance with 9.2 of CW 3110. Unsuitable Excavated material shall be disposed of as per Item 9.3 of CW 3110. All surplus material will be disposed of in accordance with Item 9.3 of CW 3110.
- E15.3.3 The Contractor shall restrict his activities strictly to within the limits of the Work, unless receiving prior written approval from the Contract Administrator. The Contractor shall take all precautions to prevent damage to traffic structures, pole lines, existing trees, Site services and adjacent property and he shall be liable for any damages occurring in the performance of this Work.
- E15.3.4 The Contractor shall examine the Site and make themselves familiar with the existing conditions and the nature of the Work to be done.
- E15.3.5 Contractor to prevent damage to surface or underground utility lines which are to remain and make good any damage as his own cost.
- E15.3.6 Excavated or graded materials to be approved before use as fill for grading Work. Protect such approved material from contamination. Stockpile in approved locations. Protection and stockpiling are incidental to unit prices bid for excavation, removals and rough grading.
- E15.3.7 All foundations shall be removed to full depth to the satisfaction of the Contract Administrator. Fill all holes resulting from removals with compacted clay fill in sodded and playground areas and compacted granular fill in paved areas.
- E15.3.8 The Contractor shall excavate topsoil as per CW 3170 Section 9.2. Topsoil excavation is incidental to the unit prices bid for excavation, removal and rough grading.
- E15.3.9 The Contractor shall ensure that upon completion of the removal operations the Site is left in a neat condition free from debris, etc. for approval by the Contract Administrator prior to placing base courses and clean fill.

- E15.3.10 Except for drainage swales, berms and embankments indicated, the design gradient for all other areas shall be considered to be straight grade between the design elevations shown. Changes in grade at swales, berms, embankments and field shall be gently contoured as directed by the Contract Administrator to provide future ease of grass mowing operation.
- E15.3.11 In fill areas, where the difference between the existing grade elevation and the design elevation is less than 300mm the Contractor shall scarify the existing ground to a minimum depth of 150mm prior to placement of any fill.
- E15.3.12 The Contractor is advised that there may be useable topsoil, clay and gravel fill on Site. All suitable material will be reviewed and approved by the Contract Administrator and then re-used on Site. The re-use of this material on Site may reduce the quantity of imported topsoil, gravel and clean earth fill required. The Contractor shall re-use existing Site material prior to delivering new material to Site.
- E15.3.13 No direct payment will be made for placing and grading of existing fill as all costs for this Work shall be incidental to the unit prices bid in this contract for excavation and grading.
- E15.3.14 Compaction shall include the use of sheep's foot or other suitable compaction equipment as approved by the Contract Administrator to achieve a minimum compaction of 98% Standard Proctor Density below all paved areas, and 95% Standard Proctor Density in all other areas disturbed under this Contract.
- E15.3.15 The Contractor shall construct the sub-grade surface to the following depths below the grades shown on the Drawings for each area:
- (a) Asphalt Pathway 275mm
  - (b) Playground area 150mm min.
- E15.3.16 The Contractor is advised that all excavations, removals, disposal, rough grading, compaction and related Work for construction of asphalt pathway and playground areas shall be incidental to the unit prices bid for each item as listed in the schedule of prices.
- E15.3.17 Following earth moving, rough grading and compaction the Work areas shall be fine graded to provide a maximum deviation of 50mm in 10 metres from the design grade with no low areas to 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 50mm in maximum dimensions.
- E15.3.18 Remove and dispose of existing play equipment, all safety surfacing and concrete foundations. Fill holes with clean earth fill and compact to 98% SPD. Removal of existing sand safety surfacing is incidental to the unit prices bid for excavation, removals and rough grading.
- E15.3.19 Remove section of existing play area as shown on plans including timber edging and safety surfacing. Fill area as required to meet subgrade for topsoil and sod.
- E15.3.20 If required and at locations directed by the Contract Administrator, the Contractor shall excavate and remove unsuitable subgrade material and replace it with compacted granular material in accordance with Specification CW3110.
- E15.3.21 Contractor to remove and salvage wood bollards. Stockpile bollards in approved location. Refer to E20.
- E15.4 Method of Measurement
- E15.4.1 Removal of existing play equipment and concrete bases shall be measured on a lump sum basis in accordance with the Drawings and Specifications and as measure and accepted by the Contract Administrator.
- E15.4.2 Sawcut, excavate, remove and dispose of asphalt paving and unsuitable base courses shall be measured on an area basis. The numbers to be paid shall be the total number of square metres removed in accordance with the Drawings and Specifications and as measure and accepted by the Contract Administrator.

- E15.4.3 Excavation, removals, and rough grading shall be measured on an area basis. The area to be paid shall be the total number of square metres completed in accordance with the Drawings and Specifications and as measure and accepted by the Contract Administrator.
- E15.4.4 Remove, salvage and reinstall rock boulders shall be measured on a volume basis. The numbers to be paid shall be the total number of cubic meters reinstalled in accordance with the Drawings and Specifications and as measure and accepted by the Contract Administrator.
- E15.5 **Basis of Payment**
- E15.5.1 Removal of existing play equipment and concrete bases will be paid for at the contract lump sum price for "Remove existing play structures and concrete bases" measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.
- E15.5.2 Sawcut, excavate, remove and dispose of asphalt paving and unsuitable base courses will be paid for at the contract unit price per square meter for "Sawcut, excavate, remove and dispose of asphalt paving and unsuitable base courses" measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.
- E15.5.3 Excavation, removals, and rough grading will be paid for at the contract unit price per square meter for "Excavation, removals, and rough grading (including removal and disposal of existing sand surfacing)" measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.
- E15.5.4 Remove, salvage and reinstall rock boulders will be paid for at the contract unit price per cubic metre for "Remove, salvage and reinstall rock boulders" measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.

**E16. SAWCUTTING PAVEMENT**

- E16.1 At the limits of excavation, the Contractor shall sawcut the existing to produce a clean straight edge when excavated.
- E16.2 No payment will be made for sawcutting, removal and disposal of any surplus material as this shall be incidental to this specification..

**E17. MATCHING EXISTING GRADES**

- E17.1 Wherever the proposed paving, or sod meets existing building edge, doorway, or property line, the Contractor shall construct the proposed element to an acceptable grade, as directed by the Contract Administrator, to ensure that proper drainage and accessibility are maintained.

**E18. BASE COURSE MATERIAL**

- E18.1 This Specification shall supplement Standard Construction Specification CW 3110 and CW 3130.
- E18.2 The Work of this section comprises the furnishing of all labour, equipment and materials required to complete the supply and placing of base course material Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to, the following:
- (a) Supply and Placement of Base Course Material
  - (b) Supply and Placement of Sub-Base
  - (c) Supply and Installation of Separation/Reinforcement Geotextile Fabric
  - (d) Compaction

- E18.3 There will be no separate measurement and payment supply and placement of sub-base. All Work shall be considered incidental to this specification.
- E18.4 There will be no separate measurement and payment for supply and installation of Separation/Reinforcement Geotextile Fabric. All Work shall be considered incidental to this specification.
- E18.5 There will be no separate measurement and payment for compaction. All Work shall be considered incidental to this specification.
- E18.6 All costs in connection with the testing and approval of base courses shall be considered incidental to this specification.
- E18.7 Method of Measurement/Basis of Payment
- E18.7.1 The Contractor is advised that all Work under this section is incidental to the unit prices bid in those items for which base course material is required under this Contract.

## **E19. ASPHALT PATHWAY**

### E19.1 Description

E19.1.1 Further to CW 3410 and CW 3110 the Work of this section comprises the furnishing of all labour, equipment and materials incidental and required to complete the construction of asphalt pathway as shown on the drawings and as hereinafter specified, including but not necessarily confined to:

- (a) Construction of Asphalt Pathway, including supply and installation of base courses, and asphalt paving as shown on the Drawings.

### E19.2 Materials

- (a) Subbase as per CW 3110;
- (b) Base course as per CW 3110;
- (c) Asphalt as per CW 3410.

### E19.3 Construction Methods

#### Base Course and Subbase

E19.3.1 Contractor shall construct a compacted gravel base for asphalt pavement to depths as shown on the Construction Drawings in accordance with City of Winnipeg Specification CW 3110. Additional gravel shall be supplied and installed if necessary to attain proper subgrade elevations. Cost of constructing compacted gravel base shall be incidental to cost of 'Supply and install asphalt pathway including excavation, base courses and compaction'.

#### Asphalt Surface

E19.3.2 Compacted asphaltic concrete surface shall be constructed in accordance with City of Winnipeg Specification CW 3410 and the Construction Drawings.

### E19.4 Acceptance

E19.4.1 Any Work not satisfactory as specified herein and as determined by the Contract Administrator shall be rectified by the Contractor. This process of inspection and correction shall continue until the Contract Administrator is satisfied that the Work is 100% complete and as per the construction drawings and specifications.

### E19.5 Method of Measurement

E19.5.1 Asphalt Pathway shall be measured on an area basis. The area to be paid for shall be the total number of square metres placed in accordance with this Specification and the Construction Drawings, as determined by the Contract Administrator.

E19.6 Basis of Payment

E19.6.1 Asphalt Pathway will be paid for at the contract unit price per square metre for 'Supply and Install Asphalt Pathway including excavation, base courses and compaction' measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.

**E20. WOOD BOLLARD**

E20.1 Description

E20.1.1 The Work of this section comprises the furnishing of all labour equipment and materials incidental and required to complete the remove, salvage, stockpile and reinstall wood bollards as shown on the drawings and hereinafter specified.

E20.2 Installation

E20.2.1 Remove, salvage and stockpile existing wood bollards as per E15.

E20.2.2 Wood bollards to be reinstalled as per the drawings and City of Winnipeg standards.

E20.3 Method of Measurement

E20.3.1 Remove, stockpile and reinstall wood bollards shall be measured on a per unit basis. The numbers to be paid shall be the total number of units installed in accordance with the Drawings and Specifications and as measured and accepted by the Contract Administrator.

E20.4 Basis of Payment

E20.4.1 Remove, stockpile and reinstall wood bollards will be paid for at the Contract unit price for "Remove, stockpile and reinstall wood bollards" measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.

**E21. LANDSCAPE ROCK**

E21.1 Scope Of Work

E21.1.1 The following list generally describes the scope of this Section:

- (a) Supply and install rough field stone rock on geotextile fabric

E21.2 Samples

E21.2.1 Submit to the Contract Administrator samples of the following materials:

- (a) Rock: 1 -350mm-450mm O.D.
- (b) Geotextile: 1 sq.m

E21.3 Products

E21.3.1 Limestone and granite rock to be from a Manitoba quarry, colour to be approved by Contract Administrator. Size range to be:  
350mm-450mm O.D. – 50%  
550mm-600mm O.D. – 40%  
650mm-800mm O.D. – 10%

E21.4 Subgrade Inspection

- E21.4.1 Verify grades of compacted subgrade (to 95% SPD) and adjacent features for conformity with existing grades before placing boulder.
- E21.4.2 Remove and dispose of unsuitable subgrade material as directed by Contact Administrator.
- E21.5 Placement and Compaction of Landscape Rock
- E21.5.1 Supply and installation of Geotextile as per the Drawings. The cost to supply and install geotextile is incidental to the Work in this section.
- E21.5.2 Place landscape rock in locations specified by Contract Administrator for use as retaining wall. Install as per Drawings.
- E21.5.3 Excavate and backfill with compacted granular base around boulder. Tamper down in 150mm lifts and compact to 95% SPD. Supply and installation of granular base is incidental to the Work in this section.
- E21.6 Method of Measurement
- E21.6.1 Rock Boulders shall be measured on a volume basis. The items to be paid for shall be the total cubic metres that are placed in the completed Work in accordance with this specification, acceptable to the Consultant.
- E21.7 Basis of Payment
- E21.7.1 Rock Boulders will be paid for at the Contract Unit Price per cubic metre for "Supply and Install Rock Boulders", measured as specified herein, which price shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the Work included in this specification.

## **E22. PLAY EQUIPMENT**

- E22.1 Description
- E22.1.1 The Work of this section comprises the furnishing of all labour, equipment and materials required to complete the supply and installation of play equipment as follows:
- (a) Supply and install troller ship play structure as per drawings;
  - (b) Supply and install lighthouse and rock play structure as per drawings;
  - (c) Supply and install swing set with cargo bridge panel as per drawings;
  - (d) Supply and install timber ship play structure as per drawings;
  - (e) Supply and install ship mast swing set as per drawings;
  - (f) Supply and install flying fish spring rider as per drawings;
  - (g) Supply and install accessible sway fun sail boat structure as per drawings;
  - (h) Supply and install townscape play panels as per drawings;
  - (i) Supply and install flag pole with 'Kilcona Harbour' permalene flag as per drawings;
  - (j) Concrete foundations for all play equipment as per manufacturer's recommendations (including stamped structural details). This Work is incidental to cost of supply and installation of all play equipment listed above.
- E22.1.2 This specification does not include the pre-installation Site preparation Work and perimeter edging. Contractor to ensure layout of these Works is co-ordinated with layout and installation of play equipment and concrete bases.
- E22.2 General
- E22.2.1 The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the drawings and specifications.

E22.2.2 The layout of playground equipment to be as shown on the Drawings and as specified herein.

### E22.3 Materials

#### E22.3.1 Posts / Caps

- (a) All posts shall be a minimum of 5" O.D. round or 4" square tubing. All posts shall be fabricated from either aluminum (0.125" min. wall thickness) or galvanized steel (0.120" min. wall thickness) tubing with a baked-on polyester powder coating. The powder coating finish shall meet or exceed ASTM standards for hardness, adhesion, impact and salt spray resistance. Colour scheme as per Detail drawings. All fabrication cuts drill holes and weld joints shall be sprayed with a corrosion resistant coating prior to powder coating. The bottom end of the posts is to be sealed with a moisture barrier.
- (b) Top caps for posts shall be aluminium die cast and powder coated the same as the post colour. All caps shall be factory installed and secured in place with tamper proof, self-sealing rivets.
- (c) Vertical Posts for PlayWood shall be 5.5" (140 mm) square pressure treated southern yellow pine complete with an aluminium upright cap.

#### E22.3.2 Decks

- (a) All metal decks shall be manufactured from vinyl-coated perforated steel.
- (b) PlayWood Decks shall be a mechanical assembly consisting of a pressure treated southern yellow pine frame and deck surface. The frame shall consist of 2.5" (64 mm) x 5.5" (140 mm) framing members. The deck surface shall consist of a series of 1.5" (38 mm) x 5.5" (140 mm) deck boards between which there shall be a 0.188" (5 mm) space.

#### E22.3.3 Clamping System

- (a) All deck, rail and play component clamping systems shall be fabricated from zinc plated, and galvanized steel, stainless steel or aluminium, and baked-on polyester powder coated to match post colour unless noted on Detail drawings. Tamper proof, corrosion resistant fasteners shall be used to retain clamping systems.

#### E22.3.4 Handrails, Safety Rails and Handloops

- (a) All metal handrails, safety rails and handloops shall be fabricated using a minimum of 1 1/8" O.D. with a 0.125" wall thickness steel tubing. After all fabrication activities have occurred including end cuts, drill holes, bends and weld joints, all components shall be hot dipped galvanized and baked-on polyester powder coated. Colours as per Detail drawings.
- (b) Hand Rails shall consist of 2.5" (64mm) x 5.5" (140 mm) pressure treated southern yellow pine machined to the appropriate shape.
- (c) Horizontal Guard Rail Panel shall consist of two 2.5" (64 mm) x 5.5" (140 mm) pressure treated southern yellow pine rails fastened directly to the vertical posts.

#### E22.3.5 Hardware

- (a) All fasteners shall be socketed and tamper proof in design, and either carbon steel plated with zinc/nickel and iridescent chromate finish or stainless steel.

#### E22.3.6 Poly Components

- (a) Poly components such as slides, hoods, and roofs shall be fabricated from U.V. stabilized, rotationally moulded liner low density polyethylene. All play components must be durable and of heavy duty construction to meet all requirements and specifications.
- (b) Poly components such as play panels shall be fabricated from compression molded solid colour, U.V. stabilized high density polyethylene.

- E22.3.7 Lumber
- (a) Lumber shall consist of southern yellow pine grade marked #1 or better, S4S. Lumber shall be milled smooth on all sides. All lumber shall be thoroughly seasoned and shall be 19% or less moisture content for 2" nominal dimensions and 25% or less moisture content on 3" or thicker nominal dimensions. The dimensions will be eased to 3/8" radius. Other characteristics shall be in accordance with "Standard Grading Rules of Southern Pine Inspections Bureau" latest edition. Lumber shall be pressure treated with ACQ to a retention level of 0.40 pounds per cubic foot of wood/oxide basis in compliance with American Wood Preservers' Association Standard P-5 and Federal Specifications TT-W-550.
- E22.3.8 The troller ship play structure shall be Custom Heavy Duty Playbooster as supplied by:
- Playgrounds-R-Us  
250 Transport Road  
Winnipeg MB  
Ph. 932-7000  
Contact: Jodi Marr  
Or approved alternate in accordance with B6.
- E22.3.9 The lighthouse and rock play structure shall be Custom Heavy Duty Playbooster Lighthouse and The Pointe as supplied by:
- Playgrounds-R-Us  
250 Transport Road  
Winnipeg MB  
Ph. 932-7000  
Contact: Jodi Marr  
Or approved alternate in accordance with B6.
- E22.3.10 The swing set with cargo bridge panel shall be Model #100051J 8' high 5000 series swing set with Model #111581C 8' high additional bay and Custom Cargo Bridge Sign as supplied by:
- Playgrounds-R-Us  
250 Transport Road  
Winnipeg MB  
Ph. 932-7000  
Contact: Jodi Marr  
Or approved alternate in accordance with B6.
- E22.3.11 The timber ship play structure shall be Model #14760 as supplied by:
- Henderson Recreation Equipment Ltd.  
2311 Hwy #134  
Peterborough, Ont. K9J 8J6  
Ph. 800-265-5462  
Contact: Dave Henderson  
Or approved alternate in accordance with B6.
- E22.3.12 The ship mast swing set shall be custom toddler swing with 1 furled sail crossover as supplied by:
- Playgrounds-R-Us  
250 Transport Road  
Winnipeg MB  
Ph. 932-7000  
Contact: Jodi Marr  
Or approved alternate in accordance with B6.
- E22.3.13 The flying fish spring rider shall be custom jumping fish sit on spring rider as supplied by:

Playgrounds-R-Us  
250 Transport Road  
Winnipeg MB  
Ph. 932-7000  
Contact: Jodi Marr  
Or approved alternate in accordance with B6.

- E22.3.14 The accessible sway fun sail boat structure shall be custom sway sail boat with small steel sails as supplied by:

Playgrounds-R-Us  
250 Transport Road  
Winnipeg MB  
Ph. 932-7000  
Contact: Jodi Marr  
Or approved alternate in accordance with B6.

- E22.3.15 The townscape play panels shall be custom playshaper Harbourfront Townscape c/w 2.375" O.D. square recycled aluminium posts and Permalene panels as supplied by:

Playgrounds-R-Us  
250 Transport Road  
Winnipeg MB  
Ph. 932-7000  
Contact: Jodi Marr  
Or approved alternate in accordance with B6.

- E22.3.16 The flag pole with 'Kilcona Harbour' permalene flag shall be custom flagpole with "Kilcona Harbour" flag as supplied by:

Playgrounds-R-Us  
250 Transport Road  
Winnipeg MB  
Ph. 932-7000  
Contact: Jodi Marr  
Or approved alternate in accordance with B6.

#### E22.4 Canadian Standards Association Guidelines

- E22.4.1 All playground equipment supplied and the method of installation shall be in accordance with the most recent edition of the "National Standard of Canada, CAN/CSA-Z614-98".

- E22.4.2 The Contractor shall submit, within two (2) Business Days of request of Contract Administrator, a written statement confirming compliance with this guideline and shall be prepared, if requested, to provide data supporting compliance within ten (10) Working days of such a request, at no cost to the City.

#### E22.5 Installation

- E22.5.1 Install all components as per manufacturer's specifications. Install manufacturer's standard fittings, fasteners and hardware as required. All posts and anchors to be installed in concrete footings as per manufacturer's specification and details. Impervious seal to be applied around all in-ground components, to prevent water seepage, as per manufacturer's specifications.

- E22.5.2 Play structures and Swing Standards shall be installed as per the Canadian Standards Association Guidelines. All posts and other vertical items shall be true to vertical. All decks shall be level.

## E22.6 Manufacturer's Shop Drawings and Specifications

E22.6.1 The Contractor shall submit, THREE (3) COPIES of the manufacturers' shop drawings and specifications for all the play equipment for review, evaluation and approval purposes within five (5) Business Days of award of Contract. One (1) approved copy will be returned to the successful Contractor. Shop drawings shall be drawn to scale and include all components, proposed layout and dimensions.

E22.6.2 Review of the Shop Drawings in no way relieves the Contractor of the final responsibility for correctness of the dimensions, sizes, fabrication details, errors made therein, or for any changes made by the bid opportunity or specifications not covered by the Contractor's written notification to the Contract Administrator. No reprint of the Bid Opportunity Drawings shall be used as the shop drawings.

## E22.7 Concrete Foundations

E22.7.1 All playground equipment posts, bases and anchors are to be set in concrete footings or piles to ensure stability and prevent frost heaving. The current Standard Construction Specifications of the City of Winnipeg, CW 2160-R4 - Concrete to be Used in Underground Works, is to be utilized in the installation of the concrete Works for all below ground components. All foundations are to be stamped by a Structural Engineer licensed to practice in the province of Manitoba.

E22.7.2 The specific concrete requirements shall be:  
Sulfate resistant, Type 50 Cement  
28 day compressive strength of 30 Mpa  
maximum aggregate size of 40mm, nominal  
slump 90 20mm  
maximum water/cement ratio 0.45

E22.7.3 No separate payment will be made for concrete foundation for play equipment. All Work is incidental to the unit prices bid for the items.

## E22.8 Installation

E22.8.1 Contractor to layout playground for review and approval by Contract Administrator prior to excavating for piles.

E22.8.2 Contractor shall notify the Contract Administrator at least 48 hours prior to installation of concrete, so that footings may be inspected in advance of concrete being poured.

E22.8.3 Play structure posts shall be centered in concrete footing with a minimum 200mm band of concrete on all sides.

E22.8.4 Concrete Bases shall be buried below the bottom of the protective surfacing and have top corners rounded and all rough edges removed according to CSA standards.

E22.8.5 Concrete Bases shall be sized appropriately to withstand constant stresses and prevent any shifting of the components. Contractor shall be prepared to supply detailed dimension and specification for the concrete foundations/footings for all components.

## E22.9 Maintenance Kits

E22.9.1 All play equipment shall include the supply of maintenance kits. Maintenance kits shall include maintenance manuals, complete manufacturer's parts lists, touch-up paint, PVC repair paint, 10% extra of each bolt, washer and any other hardware utilized on the play equipment, and all special tools necessary for assembly and maintenance.

## E22.10 Method of Measurement

E22.10.1 Supply and installation of play equipment shall be measured on a per unit basis. The number of units to be paid shall be the total number of units supplied and installed in accordance with the Specifications and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

## E22.11 Basis of Payment

- E22.11.1 Supply and Installation of play equipment shall be paid for on a per item basis for "Supply and install play equipment" measured as specified herein, which price shall be payment in full for supplying all materials (including concrete foundations) and performing all operations herein described and all other items incidental to the Work included in this Specification.

## **E23. RECYCLED RUBBER CHIP PLAYGROUND SURFACING**

### E23.1 Description

- E23.1.1 The Work comprises the furnishings of all labour, equipment services and materials required to complete the installation of playground surfacing within the play structure and swing areas as indicated on the drawings.

### E23.2 General

- E23.2.1 Contractor shall visit the Site and verify all data and dimensions and report any errors, omissions or discrepancies to the Contract Administrator prior to any installation.

### E23.3 Material

- E23.3.1 The Perma Life safety surfacing as supplied by:

Playgrounds-R-U's  
250 Transport Road  
Winnipeg MB  
Ph. 632-7000  
Contact: Jodi Marr  
Or approved alternate in accordance with B6.  
Color: Blue

### E23.4 Submittals

- E23.4.1 Submit manufacturer's product data, including installation instructions and subsurface instructions.
- E23.4.2 Submit manufacturer's sample of 1kg.
- E23.4.3 Submit certified test reports from qualified independent testing agency indicating results of impact attenuation testing.
- E23.4.4 Submit manufacturer's certificate of compliance indicating materials comply with specified requirements.
- E23.4.5 Manufacturer's Project References:  
(a) Submit list of successfully completed projects.  
(b) Include project name and location, name of architect, and type and quantity of playground safety surfacing tiles furnished.
- E23.4.6 Maintenance Instructions: Submit manufacturer's maintenance and cleaning instructions.
- E23.4.7 Submit manufacturer's standard warranty.

### E23.5 Construction Methods

- E23.5.1 Contractor to remove existing sand safety surfaces as per section E15.
- E23.5.2 Safety Surfacing shall be installed within all the play areas, as defined by the edging, to a minimum installed compacted depth of 150mm.
- E23.5.3 The installation of the Safety Surfacing shall be done immediately after the play structure has been installed.

E23.5.4 Installation shall be done by equipment sized to suit the Work being done and shall be spread by hand in the immediate vicinity of the play structures so as not to damage the same. The play structures shall be swept clean as required after installation.

E23.5.5 Safety Surfacing to be installed as per, CSA Standards, play equipment manufacturer's specifications and as directed by Contract Administrator on Site.

#### E23.6 Method of Measurement

E23.6.1 Supply and Install Perma Life safety surfacing will be measured on an volume basis. The quantity to be paid for will be the actual number of cubic meters supplied and installed in accordance with this Specification and accepted by the Contract Administrator, as computed from the measurements made by the Contract Administrator.

#### E23.7 Basis of Payment

E23.7.1 Supply and Install Perma Life safety surfacing shall be paid for at the Contract Unit Price per cubic meter for 'Supply and Install Perma Life safety surfacing' measured as specified herein, which price shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the Work included in this specification.

### **E24. PLAYGROUND TILES**

#### E24.1 Description

E24.1.1 The Work comprises the furnishings of all labour, equipment services and materials required to complete the installation of interlocking playground safety surfacing tiles within the play structure and swing areas as indicted on the drawings.

#### E24.2 References

- (a) ASTM C 67 - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
- (b) ASTM D 395 - Standard Test Methods for Rubber Property--Compression Set.
- (c) ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers--Tension.
- (d) ASTM D 573 - Standard Test Method for Rubber-Deterioration in an Air Oven.
- (e) ASTM D 624 - Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
- (f) ASTM D 1667 - Standard Specification for Flexible Cellular Materials-Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).
- (g) ASTM D 2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
- (h) ASTM D 2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials.
- (i) ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings.
- (j) ASTM E 303 - Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
- (k) ASTM F 1292 - Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
- (l) US Consumer Product Safety Commission (CPSC) Handbook for Playground Safety.

#### E24.3 Submittals

E24.3.1 Submit manufacturer's product data, including installation instructions and subsurface instructions.

- E24.3.2 Submit manufacturer's sample of 1 full tile.
- E24.3.3 Submit certified test reports from qualified independent testing agency indicating results of impact attenuation testing.
- E24.3.4 Submit manufacturer's certificate of compliance indicating materials comply with specified requirements.
- E24.3.5 Manufacturer's Project References:
  - (a) Submit list of successfully completed projects.
  - (b) Include project name and location, name of architect, and type and quantity of playground safety surfacing tiles furnished.
- E24.3.6 Maintenance Instructions: Submit manufacturer's maintenance and cleaning instructions.
- E24.3.7 Submit manufacturer's standard warranty.
- E24.4 Quality Assurance
  - E24.4.1 Manufacturer's Qualifications: Manufacturer shall meet a minimum of 1 of the following 2 requirements.
    - (a) Continuously engaged in manufacturing of playground safety surfacing tiles of similar type to that specified, with a minimum of 10 years successful experience.
    - (b) Furnished a minimum of 1,000,000 square feet of playground safety surfacing tiles of similar type to that specified.
  - E24.4.2 Installer's Qualifications:
    - (a) Successful experience in installation of playground safety surfacing tiles of similar type to that specified, with a minimum of 25 projects completed within last 5 years.
    - (b) Employ persons trained for installation of playground safety surfacing tiles.
    - (c) Approved by manufacturer.
- E24.5 Delivery, Storage and Handling
  - E24.5.1 Deliver materials to Site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
  - E24.5.2 Storage:
    - (a) Store materials in accordance with manufacturer's instructions.
    - (b) Playground Safety Surfacing Tiles:
      - (i) Store tiles in a dry area at a minimum temperature of 50 degrees F (10 degrees C) for a minimum of 72 hours before installation.
      - (ii) Protect tiles from direct sunlight before installation.
    - (c) Adhesive: Store adhesive in a dry area at a minimum temperature of 50 degrees F (10 degrees C).
  - E24.5.3 Protect materials during handling and installation to prevent damage.
- E24.6 Environmental Requirements
  - E24.6.1 Tile Temperature: Ensure surface temperature of playground safety surfacing tiles is a minimum of 50 degrees F (10 degrees C) at time of installation.
  - E24.6.2 Air Temperature: Ensure air temperature is a minimum of 40 degrees F (4 degrees C) for a minimum of 24 hours before and during installation.
- E24.7 Warranty

- E24.7.1 Materials and Workmanship: Playground safety surfacing tile installation shall be warranted for defects in materials and Workmanship for 10 years from date of completed installation.
- E24.7.2 Performance: Playground safety surfacing tile installation shall be warranted to meet drop height performance requirements of ASTM F 1292 for 10 years from date of completed installation.
- E24.8 Products
- E24.9 The SofSurfaces Playground Tile as supplied by:
- Playgrounds-R-Us  
250 Transport Road  
Winnipeg MB  
Ph. 632-7000  
Contact: Jodi Marr  
Or approved alternate in accordance with B6.
- E24.9.1 Tiles: "SofTILE KrosLOCK":
- (a) Series: Plus
  - (b) Description: Resilient, interlocking, playground safety surfacing tiles.
  - (c) Compliance: Meet or exceed CPSC guidelines for impact attenuation.
  - (d) Material: Compression-molded, recycled rubber and binding agents.
  - (e) Tile Locking: U-shaped male and female configuration on all 4 sides to lock tiles to adjacent tiles.
  - (f) Top Edges: Chamfered.
  - (g) Tile Bottom: Hollow core stanchion pattern. Stanchions shall have density equivalent to wear layer.
  - (h) Wear Layer: Plus Series: Elongated SBR rubber buffings. Pigmentation used to achieve color. Minimum 0.375 inch thick.
  - (i) Size: 24 inches by 24 inches, plus or minus 1/8 inch.
  - (j) Thickness: 3.75 inches-10' CFH
  - (k) Minimum Weight Each Tile: Plus Series: 3.75-Inch Thickness: 31.0 pounds
  - (l) Colors: Plus Series: Turf Green and Basic Black as indicated on the Drawings.
    - (i) Percent Color: 75 percent color, 25 percent black
- E24.9.2 Test Results:
- (a) Impact Attenuation, ASTM F 1292:
    - (i) Gmax: Less than 150.
    - (ii) Head Injury Criteria (HIC): Less than 750.
  - (b) Freeze Thaw, ASTM C 67: No deterioration.
  - (c) Rubber Deterioration / Air Oven, ASTM D 573: No deterioration.
  - (d) Slip Resistance:
    - (i) ASTM E 303:
      - ◆ Dry: 102.
      - ◆ Wet: 62.
    - (ii) ASTM D 2047:
      - ◆ Dry: 0.81.
      - ◆ Wet: 0.82.
  - (e) Compression Deflection, ASTM D 1667: 29.5 psi to 25 percent compression.

- (f) Compression Set, ASTM D 395: 4.37 percent permanent set.
- (g) Tensile Strength, ASTM D 412: 107 psi.
- (h) Elongation at Break, ASTM D 412: 165 percent.
- (i) Tear Strength, ASTM D 624: 33.1 pounds per inch.
- (j) Wear Surface Density (Durability): 60 pcf minimum.
- (k) Flammability:
  - (i) Burning Pill, ASTM D 2859: Pass.

#### E24.9.3 Accessories

- (a) Corners:
  - (i) Prefabricated outside and inside corners.
  - (ii) Material: Same as playground safety surfacing tiles.
- (b) Ramps:
  - (i) Prefabricated Ramps: "SofRAMP Jr."
  - (ii) Prefabricated ADA-Compliant Ramps: "SofRAMP ADA"
  - (iii) Material: Same as playground safety surfacing tiles.
- (c) Adhesive:
  - (i) Single-component, 100 percent solids, polyurethane.
  - (ii) Waterproof.
  - (iii) Tube format.
  - (iv) Approved by manufacturer.

#### E24.10 Execution

##### E24.10.1 Examination

- (a) Examine areas to receive playground safety surfacing tiles. Notify Architect if areas are not acceptable. Do not begin installation until unacceptable conditions have been corrected.

##### E24.10.2 Preparation

- (a) Prepare subsurface in accordance with manufacturer's instructions to ensure proper support and drainage for playground safety surfacing tiles.
- (b) Asphalt Subsurface as per E19
- (c) Ensure asphalt is sound with no loose material or cracks over 1/8 inch wide.
- (d) Variations in Elevation: Repair variations in elevation of completed subsurface greater than plus or minus 1/4 inch over 10 feet in any direction.

#### E24.11 Installation

- E24.11.1 Install playground safety surfacing tiles in accordance with manufacturer's instructions at locations indicated on the Drawings.
- E24.11.2 Ensure prepared subsurface and tiles are dry and clean.
- E24.11.3 Layout tile surface in accordance with manufacturer's instructions.
- E24.11.4 Install tiles in a single installation session.
- E24.11.5 Layout in advance tiles to be installed in single installation session.
- E24.11.6 Apply adhesive in accordance with manufacturer's instructions for tile-to-tile and perimeter tile-to-base installation.

#### E24.12 Cleaning

E24.12.1 Remove adhesive spills from playground safety surfacing tiles in accordance with manufacturer's instructions.

E24.12.2 Clean tiles in accordance with manufacturer's instructions.

#### E24.13 Protection

E24.13.1 Protect playground safety surfacing tiles from foot traffic for a minimum of 12 hours after installation.

E24.13.2 Protect completed tiles from damage during construction.

#### E24.14 Method of Measurement

E24.14.1 Supply and install playground safety tile will be measured on an area basis. The area to be paid for shall be the total number of square metres placed and maintained in accordance with this Specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

#### E24.15 Basis of Payment

E24.15.1 Supply and install playground safety tile will be paid for at the Contract Unit Price per square metre for 'Supply and install Sof-Surface safety tiling', measured as specified herein, which price shall be payment in full for completing all operations herein described and all other items incidental to the Work included in this Specification.

### **E25. WOOD DECKING**

#### E25.1 Description

E25.1.1 In general Works are applicable to a wood pier and ramp structure.

#### E25.2 References

- (a) CSA B111-1974 Wire Nails, Spikes and Staples.
- (b) CAN/CSA-O80 Series-97 (R2002) Wood Preservation.
- (c) CAN/CSA-O80.20-97 Fire-Retardant Treatment of Lumber by Pressure Processes.
- (d) CAN3-O86-M84 Engineering Design in Wood (Working Stress Design).
- (e) NLGA Standard Grading Rules for Canadian Lumber-2003

#### E25.3 Quality Assurance

E25.3.1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

#### E25.4 Setting Out of Work

E25.4.1 Contractor shall provide a layout of Work on Site for review and approval by Contract Administrator prior to construction.

E25.4.2 Contractor shall be responsible for setting control and completing all grading, alignment and other Work executed under this Contract to all lines, elevations, reference points and measurements based on plans, specifications, basic control points and benchmark(s) as shown on the Drawings.

E25.4.3 Contractor shall employ competent person(s) to lay out Work.

E25.4.4 Contractor shall rectify all errors in position, levels, alignment or dimensions at no cost to the City.

#### E25.5 Cutting, Fitting and Patching

E25.5.1 Execute cutting, fitting and patching required to make Work fit properly together.

- E25.5.2 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.
- E25.5.3 Prevent electrolytic action between dissimilar metals. Use non-corrosive fasteners, anchors and spacers for securing Work.
- E25.5.4 Space anchors within limits of load bearing or shear capacity and ensure that they provide positive permanent anchorage.
- E25.5.5 Keep exposed fastenings to minimum, space evenly and lay out neatly.
- E25.5.6 Fastenings which cause splintering or cracking of material to which anchorage is made are not acceptable.
  
- E25.6 Work
  - E25.6.1 Do Work in accordance with rules and regulations of authorities having jurisdiction
  - E25.6.2 Employ qualified tradesman for all Work.
  - E25.6.3 Install all vertical members true and plumb.
  
- E25.7 Codes and Standards
  - E25.7.1 Perform Work and obtain permits in accordance with the National Codes of Canada and any other code of provincial or local application. In any case of conflict or discrepancy the more stringent requirements shall apply.
  - E25.7.2 Obtain permits and complete Work to meet or exceed the requirements of standards, codes and other documents referred to in this specification.
  - E25.7.3 Where the specifications contained herein are more stringent than the applicable code or standard utilize the most stringent.
  - E25.7.4 When requested by Contract Administrator, submit proof that materials or Workmanship, or both, meet or exceed requirements of referenced codes or standards.
  - E25.7.5 Where a standard or code of any type is referred to anywhere in the document, the standard or code utilized for all Work shall be the most recent whether or not the most recent is specifically shown or listed.
  
- E25.8 Shop Drawings
  - E25.8.1 Submit shop drawings to Contract Administrator stamped and signed by Structural Engineer licenced to practice in the Province of Manitoba
  
- E25.9 Materials
  - E25.9.1 All materials as shown on the drawings and approved shop drawings.
  - E25.9.2 Wood Decking: to NGLA standard Grading Rules for Canadian Lumber Select Grade, AC2 Pressure Treated Spruce, 38x140mm laid without spaces between boards.
  - E25.9.3 Joists: to be of NGLA standard Grading Rules for Canadian Lumber Select No. 1 Structural Grade, Pressure Treated Spruce, 38x89mm size.
  - E25.9.4 Screws: to CSA B111, hot dipped galvanized finish; sizes as recommended in CAN3-086.
  
- E25.10 Construction
  - E25.10.1 Set pressure treated posts into pre-drilled holes and backfill with granular base course as indicated in the Drawings
  - E25.10.2 Install pier on pressure treated posts as indicated in the Drawings
  
- E25.11 Field Quality Control
  - E25.11.1 Testing moisture content of delivered material will be by moisture meter with adjustments for species and temperature.

E25.11.2 Costs of tests will be at Contractors expense as part of bid price for Work under this section.

E25.12 Cleaning

E25.12.1 Remove tool marks, bruises, and scratches.

E25.13 Method of Measurement

E25.13.1 Supply and Install wood pier and ramps will be measured on a lump sum basis. The number of each item to be paid for will be the total number supplied and placed in accordance with this Specification and accepted by the Contract Administrator, as measured by the Contract Administrator.

E25.14 Basis of Payment

E25.14.1 Supply and install wood pier and ramps will be paid for at the Contract Lump Sum Price for 'Supply and install wood pier and ramps', measured as specified herein, which price shall be payment in full for completing all operations herein described and all other items incidental to the Work included in this Specification.

**E26. SITE FURNITURE**

E26.1 Description

E26.1.1 This specification covers the supply and installation of Custom Tache style recycled plastic timber backless bench with armrests.

E26.2 General

E26.2.1 Store units in a protected location, immediately upon arrival on the Site.

E26.2.2 Remove from Site any units which have been damaged during transportation and replace.

E26.3 Products

E26.3.1 Custom Recycled Plastic Bench Tache Style backless bench with armrests as supplied by:

City of Winnipeg  
Public Works, Equipment and Material Services,  
102 1155 Pacific Ave.  
Winnipeg, Manitoba R3E 1G6  
Ph: (204) 986-5504 Fax: (204) 783-1248  
Attn. Foreman

E26.4 Installation

- (a) Benches shall be installed in locations as indicated on the Construction Drawings.
- (b) Benches to be installed as per City of Winnipeg Specifications and details.
- (c) Protect and maintain Site furnishings, including accessories, until acceptance of project Work.
- (d) Immediately remove from Site, damaged furnishing and accessories. Replace, repair, re-finish, or otherwise make good to approval of Contract Administrator.

E26.5 Method of Measurement

E26.5.1 Supply and Install Custom Tache style recycled plastic timber backless bench with armrests will be measured on a unit basis. The number of each item to be paid for will be the total number supplied and placed in accordance with this Specification and accepted by the Contract Administrator, as measured by the Contract Administrator.

E26.6 Basis of Payment

- E26.6.1 Supply and Install Custom Tache style recycled plastic timber backless bench with armrests shall be at the per unit price bid for 'Supply and Install Custom Tache style recycled plastic timber backless bench with armrests' measured as specified herein, which price shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the Work included in this Specification.

## **E27. IRRIGATION**

### **E27.1 Description**

- E27.1.1 This section covers the supply and installation of an irrigation system for the beach area.

### **E27.2 Materials**

- E27.2.1 All irrigation materials are as supplied and installed by:  
Ful Flo Industries Ltd.  
Ph: (204) 633-4414 Fax: (204) 633-5539  
Attn. Doug Sinclair

Or approved alternate

### **E27.3 Installation**

- E27.3.1 All Work to be as per manufacturer's details and specifications. Contractor to supply shop drawings and specifications to Contract Administrator five (5) Working days prior to construction start up.

- E27.3.2 All trench lines are to be repaired and compacted as per the Drawings.

### **E27.4 Method of Measurement**

- E27.4.1 Supply and install irrigation system for beach area will be measured on a lump sum basis for completing for all Works in accordance with this Specification and accepted by the Contract Administrator.

### **E27.5 Basis of Payment**

- E27.5.1 Supply and install irrigation system for beach area will be paid for at the Contract Lump Sum Prices for "Supply and install irrigation system for beach area" measured as specified herein, which price shall be payment in full for supplying all items and performing all operations herein described and all other items incidental to the Work included in this Specification.

## **E28. SODDING**

- E28.1 This specification is supplemental to City of Winnipeg Specification CW3510 and shall cover the supply and installation of sod.

### **E28.2 Method of Measurement**

- E28.2.1 Supply, placement and maintenance of sod will be measured on an area basis. The area to be paid for shall be the total number of square metres placed and maintained in accordance with this Specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

### **E28.3 Basis of Payment**

- E28.3.1 Supply, placement and maintenance of sod will be paid for at the Contract Unit Price per square metre for 'Supply and install topsoil and sod', measured as specified herein, which price shall be payment in full for completing all operations herein described and all other items incidental to the Work included in this Specification.

## **E29. PLAY SAND**

### **E29.1 General**

E29.1.1 This specification shall cover supply and installation of play sand. The Contractor shall furnish all, labour, materials, equipment and services necessary to complete the Work.

E29.1.2 The Contractor is to supply, deliver, place and spread sand within the playground perimeter to a minimum depth of 300 mm (12") as measured at any point within the perimeter after surface has been left smooth, uniform, firm against deep foot printing, and with a fine loose texture or at a compaction of 85% SPD or as otherwise noted.

E29.1.3 Co-ordinate Work in this section with Work in all other sections.

#### **E29.1.4 Source Quality**

- (a) The Contractor shall supervise all Work in this section until total Assurance performance.
- (b) When requested, the Contractor and supplier shall make arrangements for inspection of the material at the source by the Community Services representative.
- (c) Documentation from the source as to the material sold, quantity, destination, etc. shall be made available to the Community Services representative within 72 hours of a request.
- (d) Samples of the material from the source shall be made available at the Contractor's expense, to the Community Services representative within 24 hours of a request.

#### **E29.1.5 Product Delivery**

- (a) The Contractor will co-ordinate all truck and equipment Storage, Handling traffic so as not to impede the daily use of park, walkway or street.
- (b) The Contractor will be responsible for any damage to public or private property.
- (c) Sand will be stored so as to not impede the daily use of park, walkway or street and in such a way as to avoid contamination.

E29.1.6 Should the Contractor proceed to use sand which does not meet the material specifications, the Community Services Department shall proceed to have such Works corrected at the Contractor's expense.

### **E29.2 Products**

### **E29.3 Materials**

- (a) The sand shall be a natural, washed sand of rounded particles, free of fines, clay, silt, stones, or other debris. Representative type - #2 washed sand as approved by Contract Administrator and City of Winnipeg.
- (b) Sand shall meet the following gradation specifications.

Sieve Size	Percent Passing
9.5 mm	100
6.7 mm	100
4.75 mm	99.9
2.36 mm	97-100
1.18 mm	70-90
600 um	25-60
300 um	5-25
150 um	0-3
75 um	0-1

#### **E29.3.2 Testing and Quality**

- (a) The Contractor is to supply a 1 kg. sample of the installed sand Control plus gradation test results from an independent consultant when requested by the Contract Administrator.

- (b) If the installed sand fails the gradation test, the Contractor will be responsible for removing the failed sand from the Site and replacing it with approved Playground Sand. All damage to the Site and park equipment, as a result of sand removal, will be reinstated by the Contractor.
- (c) Test costs borne by the City of material found to be substandard shall be charged against the Contractor.

#### E29.4 Execution

##### E29.4.1 Preparation

- (a) The playground area is to be cleared of debris.
- (b) The subgrade is to be as per the approved drawings and shall be approved by the Contract Administrator prior to installation of sub-drains and sand. The subgrade shall have all ruts filled and levelled and loose fill levelled and/or removed.

##### E29.4.2 Installation

- (a) Sand shall be spread evenly over the entire surface within the playground perimeter, yielding an even, level surface.
- (b) Sand shall be placed in such a manner as to avoid contamination by existing sand or other material.
- (c) Depth of sand shall be a minimum 300 mm (12") or as otherwise noted as measured at any point within the perimeter after surface has been left smooth, uniform, firm against deep foot printing, and with a fine loose texture or at a compaction of 85% SPD or as otherwise noted.
- (d) Equipment which has been substantially installed cannot be left over weekends without provision of protective sand surface.
- (e) Depth of sand is to be maintained until Final Acceptance is given by the Contract Administrator.

#### E29.5 Method of Measurement

- E29.5.1 Supply, placement and maintenance of play sand will be measured on an area basis. The area to be paid for shall be the total number of square metres placed and maintained in accordance with this Specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

#### E29.6 Basis of Payment

- E29.6.1 Supply and install play sand will be paid for at the Contract Unit Price per square metre for 'Supply and install play sand' measured as specified herein, which price shall be payment in full for completing all operations herein described and all other items incidental to the Work included in this Specification.