



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 562-2012**

**KELVIN RECREATION SITE / LANDSCAPE & SKATEBOARD POD**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 KELVIN RECREATION SITE / LANDSCAPE & SKATEBOARD POD

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, August 30, 2012.

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 Division website at <http://www.winnipeg.ca/matmgt/>

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

B5.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B6. SUBSTITUTES**

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
  - (c) identify any anticipated cost or time savings that may be associated with the substitute;
  - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
  - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.
- 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/she 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/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

## **B7. BID COMPONENTS**

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

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

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

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

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

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

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

B7.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.

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

B7.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B14.1(a).

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

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

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

## **B8. BID**

B8.1 The Bidder shall complete Form A: Bid, making all required entries.

B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

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

- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
  - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
  - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
  - (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B8.4.2 All signatures shall be original.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

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

## **B10. QUALIFICATION**

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

- B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) have successfully carried out work similar in nature, scope and value to the Work; and
  - (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
  - (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba);
- B10.4 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractors has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
  - (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/> .
- B10.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.
- B10.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

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

- B11.1 Bids will not be opened publicly.
- B11.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>
- B11.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B11.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

## **B12. IRREVOCABLE BID**

- B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.
- B12.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.



### **B13. WITHDRAWAL OF BIDS**

- B13.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B13.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B13.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B13.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
  - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
  - (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.
- B13.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

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

- B14.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity or acceptable deviation there from (pass/fail);
  - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
  - (c) Total Bid Price;
  - (d) economic analysis of any approved alternative pursuant to B6.
- B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.
- B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices adjusted, if necessary, as follows:
- (a) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price; or
  - (b) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budgetary provision for the Work, the Total Bid Prices of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by progressively deducting item(s) 16 – Custom Planter Benches, 11 – Wedge Planters Central Area, 15 – Custom Skate-able Benches, and 29 - Model #152179A Saddle Spinner in the order listed, until a Total Bid Price within the budgetary provision is achieved.

B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

B14.4.2 Further to B14.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

## **B15. AWARD OF CONTRACT**

B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B15.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.

B15.2.1 Without limiting the generality of B15.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
- (d) only one Bid is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

B15.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B14.

B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

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

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

## PART C - GENERAL CONDITIONS

### C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](http://www.winnipeg.ca/matmgt/gen_cond.stm)
- C0.2 A reference in the Bid Opportunity to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Construction*.

## **PART D - SUPPLEMENTAL CONDITIONS**

### **GENERAL**

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

D1.1 In addition to the *General Conditions for Construction*, these Supplemental Conditions are applicable to the Work of the Contract.

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

D2.1 The Work to be done under the Contract shall consist of the construction of a skateboard pod, children's play area, landscaped areas, plazas and gathering spots.

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

- (a) CIP Concrete Works
- (b) Excavation and Grading
- (c) Land Drainage System
- (d) Playstructure and Play Components
- (e) Fabrication of Custom Furnishings
- (f) Tree and Shrub Planting

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

D3.1 The Contract Administrator is Scatliff+Miller+Murray, represented by:

Derek Murray  
Principal

Telephone No. 204 927-3444  
Facsimile No. 204 927-3443

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

D3.3 Bids Submissions must be submitted to the address in B7.5.

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

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

#### **D5. 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 facsimile number identified in D3.1.

D5.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:

The City of Winnipeg  
Chief Financial Officer

Facsimile No.: 204 949-1174

- D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

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

Facsimile No.: 204 947-9155

## **SUBMISSIONS**

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

- D6.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

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

- D7.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D7.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

### **D8. INSURANCE**

- D8.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
  - (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence;
  - (c) all risks installation floater, carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- D8.2 Deductibles shall be borne by the Contractor.
- D8.3 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement

of any Work but in no event later than seven (7) Calendar Days from notification of the award of Contract by Purchase Order.

D8.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

#### **D9. PERFORMANCE SECURITY**

D9.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), the Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:

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

D9.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D9.2 The Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of Purchase Order and prior to the commencement of any Work on the Site.

#### **D10. SUBCONTRACTOR LIST**

D10.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

### **SCHEDULE OF WORK**

#### **D11. COMMENCEMENT**

D11.1 The Contractor shall not commence any Work until he/she is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.

D11.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
  - (i) evidence of authority to carry on business specified in D6;
  - (ii) evidence of the workers compensation coverage specified in C6.15;
  - (iii) the Safe Work Plan specified in D7;
  - (iv) evidence of the insurance specified in D8;
  - (v) the performance security specified in D9; and
  - (vi) the Subcontractor list specified in D10.
- (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.

D11.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

## **D12. SUBSTANTIAL PERFORMANCE**

D12.1 The Contractor shall achieve Substantial Performance within forty-five (45) consecutive Working Days of the commencement of the Work as specified in D11.

D12.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D12.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

## **D13. TOTAL PERFORMANCE**

D13.1 The Contractor shall achieve Total Performance within sixty (60) consecutive Working Days of the commencement of the Work as specified in D11.

D13.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D13.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

## **D14. LIQUIDATED DAMAGES**

D14.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the City five hundred dollars (\$500.00) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.

D14.2 The amount specified for liquidated damages in D14.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.

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

## **D15. SCHEDULED MAINTENANCE**

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

- (a) Trees, shrubs and groundcover as specified in E26;
- (b) Sod as specified in E27;

D15.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

## **CONTROL OF WORK**

### **D16. JOB MEETINGS**

- D16.1 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.
- D16.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

### **D17. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

- D17.1 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**

### **D18. PAYMENT**

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

## **WARRANTY**

### **D19. WARRANTY**

- D19.1 Warranty is as stated in C13.



**FORM H1: PERFORMANCE BOND**  
(See D9)

KNOW ALL MEN BY THESE PRESENTS THAT

\_\_\_\_\_ ,  
(hereinafter called the "Principal"), and

\_\_\_\_\_ ,  
(hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), in the sum of

\_\_\_\_\_ dollars (\$\_\_\_\_\_)

of lawful money of Canada to be paid to the Obligee, or its successors or assigns, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a written contract with the Obligee for

BID OPPORTUNITY NO. 562-2012

KELVIN RECREATION SITE / LANDSCAPE & SKATEBOARD POD

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

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

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

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

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

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

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

**SIGNED AND SEALED**  
in the presence of:

\_\_\_\_\_  
(Witness as to Principal if no seal)

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

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

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

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

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT  
(PERFORMANCE SECURITY)  
(See D9)**

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

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 562-2012

**KELVIN RECREATION SITE / LANDSCAPE & SKATEBOARD POD**

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

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

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

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

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

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

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

Partial drawings are permitted.

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

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

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

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

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

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

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

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

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

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

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

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



## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

- E1.1 These Specifications shall apply to the Work.
- E1.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Spec/Default.stm>
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following are applicable to the Work:

<b><u>Specification No.</u></b>	<b><u>Specification Title</u></b>
CW 1110	General Instruction
CW 1120	Existing Services, Utilities and Structures
CW 1130	Site Requirements
CW 2160	Concrete Underground Structures and Works
CW 3110	Sub-Grade, Sub-Base and Base Course Construction
CW 3130	Supply and Installation of Geotextile Fabrics
CW 3330	Installation of Interlocking Paving Stones
CW 3410	Asphaltic Concrete Pavement Works
CW 3510	Sodding
CW 3520	Seeding
CW 3540	Topsoil and Finish Grading for Establishment of Turf Areas
CW 3615	Riprap

<b><u>Drawing No.</u></b>	<b><u>Drawing No.</u></b>
L-01	COVER SHEET
L-02	EXISTING CONDITIONS, REMOVALS & SALVAGE
L-03	GENERAL ARRANGEMENT PLAN
L-04	SCHEMATIC GRADING
L-05	CIVIL - LAND DRAINAGE
L-06	EAST FIELD - LAYOUT AND PLANTING
L-07	SKATE PARK - EXCAVATION PLAN
L-08	SKATE PARK - LAYOUT
L-09	SKATE PARK - MATERIALS & DETAIL REFERENCE
L-10	SKATE PARK - STEEL, PLAN AND DETAILS
L-12	SKATE PARK - JOINTING PLAN
L-13	SKATE PARK - DETAILS
L-14	SKATE PARK - DETAILS
L-14	PLAY AREA - LAYOUT AND DRAINAGE
L-15	DETAILED LAYOUTS - PAVING, COURT AND FENCING
L-16	PLANTING - WEST
L-17	PLANTING - EAST
L-18	DETAILS
L-19	DETAILS
L-20	DETAILS
SCD-119	WASTE RECEPTACLE – METAL SLAT
SCD-645	PARK PATH, CRUSHED LIMESTONE
S02	STRUCTURAL SECTIONS

S03 STRUCTURAL REPRESENTATIVE BACKFILL AND REINFORCING DETAIL  
S04 STRUCTURAL REPRESENTATIVE BACKFILL AND REINFORCING DETAIL

## **E2. HAZARDOUS MATERIALS**

E2.1 If asbestos or other hazardous materials are encountered during the Work of the Contract, the Contractor shall stop all work and notify the Contract Administrator immediately. Removal of hazardous materials shall be dealt with by the City and the Contractor shall await further instruction by the Contract Administrator.

## **E3. PRE-CONSTRUCTION MEETING**

E3.1 The Contractor shall not begin the Work under this Contract until a pre-construction meeting has been held between representatives of the Play Equipment Contractor, the Site Works Contractor, the Skate Park Contractor, the City of Winnipeg, Red River Community Centre and the Contract Administrator.

## **E4. SITE ACCESS**

E4.1 All access to be on the designated routes through the Site. These routes will be determined at the pre-construction meeting.

E4.2 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.

E4.3 The Contractor's operation 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. Damage to areas beyond the marked routes shall be repaired by and at the expense of the Contractor to the satisfaction of the Contract Administrator.

## **E5. PEDESTRIAN SAFETY AND TRAFFIC MANAGEMENT**

E5.1 Further to CW 1130-R2, 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.

E5.2 Ambulance/ Emergency vehicle access must be maintained at all times.

## **E6. SITE CONDITION**

E6.1 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.

E6.2 No responsibility will be assumed by the City for correctness or completeness of the Drawings, when provided, with respect to the existing utilities, pipes or other objects either underground or on the surface; the City shall not be liable for the incorrectness and inadequacy thereof. 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. 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.

E6.3 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.

## **E7. PROTECTION OF EXISTING TREES**

- E7.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities:
- (a) 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 berm or swales throughout the duration of the Contract. Protective fencing around these areas is required.
  - (b) Trees within and immediately adjacent to proposed construction and those identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400 mm wood planks, or suitably protected as approved by the Contract Administrator. Do not use nails or other fasteners that penetrate the tree trunk. The width and length of strapping may be reduced to suit the tree being protected as approved by the Contract Administrator.
  - (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches) where 1 inch diameter equals 1 foot measured from the outside edge of the trunk of the tree at 6 inches above grade. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation. They must be properly trimmed with sharp tools to prevent crushing or being pulled by construction equipment. No paint is required. All exposed roots must be mulched until the excavated area is filled with clean earth to avoid exposure to sunlight and desiccation.
  - (d) Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the Work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
  - (e) 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.
  - (f) Repair, replace and maintain tree protection materials during construction until the Project completion.
  - (g) Carefully remove safety fencing and strapping material without harming the tree as soon as the construction and restoration Work is complete.
- E7.2 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.
- E7.3 No separate measurement or payment will be made for the protection of existing structures, trees and property.

## **E8. EXISTING SERVICES AND UTILITIES**

- E8.1 This Specification shall amend and supplement CW 1120-R1.
- E8.2 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, boulevards, light standards, hydro poles, fences, fire hydrants, culverts, 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. The Contractor shall also indemnify and save harmless the City from all claims made directly or indirectly against it in respect to any such damage.



- E8.3 The Contractor's attention is drawn to the existing underground lines or services that may be located in the area of the Work.
- E8.4 The Contractor shall take all necessary precautions when performing the Work to ensure that no damage is done to these existing services.
- E8.5 No responsibility will be assumed by the City for correctness or completeness of the Drawings, when provided, with respect to the existing utilities, pipes or other objects either underground or on the surface; the City shall not be liable for the incorrectness and inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of all such utilities, pipes and other objects and to make good any damage done to them.
- E8.6 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.
- E8.7 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.
- E8.8 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.

## **E9. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES**

- E9.1 The Skatepark Contractor for the adjoining skatepark will take out a Development Permit for the Work described within this bid opportunity at this site.
- E9.2 Further to C6.12, the Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the Work may be carried out. The Contractor shall submit all plans required by any inspection authority and obtain approval of same before proceeding with the Work, and pay any cost attached to the inspection of such plans.
- E9.3 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.
- E9.4 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.
- E9.5 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Act.
- E9.6 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Fall Protection guidelines.
- E9.7 The Contractor and Sub-contractors must be fully aware of all Work involving hazardous materials. All Work must be performed in compliance with the Manitoba Department of Labour Workplace Health and Safety Guidelines and all other applicable codes. The Contractor is responsible for the immediate notification to the Contract Administrator of his/her encountering of suspected hazardous material during their course of Work.

## **E10. PROTECTION OF SURVEY INFRASTRUCTURE**

- E10.1 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.
- E10.2 Further to C:6.26 (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.

- E10.3 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.
- E10.4 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.
- E10.5 Where possible, amounts owed to the City in accordance with the above will be deducted from any payments to be made by the City to the Contractor.

#### **E11. STAKES AND MARKS**

- E11.1 The Contractor will mark, to the extent he determines to be necessary, the location, alignment and elevation of the Work by means of stakes or marks, for review and approval by the Contract Administrator. The Contractor shall make the completed Works conform to the lines and marks thus approved and indicated.
- E11.2 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.
- E11.3 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.
- E11.4 The Contractor shall determine and provide all dimensions and elevations measured from the stakes or marks.

#### **E12. SITE ENCLOSURES**

- E12.1 Temporary Site enclosures, as determined necessary at the pre-construction meeting, shall be erected and maintained as required for the duration of the construction period.
- E12.2 Site enclosures shall be considered incidental to the Contract Work.

#### **E13. PRODUCT APPROVALS**

- E13.1 The Contractor shall, following award, prepare a complete list of all material to be used on the project and submit the list to the Contract Administrator seventy-two (72) hours prior to start of construction.
- E13.2 The Contractor shall only use material which has been approved by City of Winnipeg or by the Contract Administrator. The list shall provide the product, the manufacturer and the supplier.
- E13.3 All Workmanship and materials furnished and supplied under this Specification are subject to close and systematic inspection and testing by the Contract Administrator. The Contract Administrator reserves the right to reject any materials or Works which are not in accordance with the requirements of the Specifications.

E13.4 The Contractor shall wholly be responsible for the supply, safe storage, and handling of all materials set forth in this specification, and the control of all operations, incidental thereto notwithstanding any inspection or approval that may have been previously given.

#### **E14. SURFACE RESTORATION**

E14.1 Further to Section 3.3 of CW 1130-R2, the Contractor shall temporarily repair any Work commenced and not completed in the 2012 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.

#### **E15. MAINTENANCE KITS**

E15.1 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.

E15.2 There shall be no payment for the maintenance kits.

#### **E16. AS-BUILT DRAWINGS**

E16.1 The Contractor shall provide the Contract Administrator As-Built Drawings for the installed play equipment (DWG format) once Total Performance is attained.

#### **E17. SITE CLEAN UP**

E17.1 The Contractor shall upon the completion of Work each day, load and dispose of all excess asphalt cuttings, spoiled concrete, reinforcing steel, granular and other material associated with the Works from the Work Site. The Contractor shall secure or remove all of his machinery and equipment at the end of each day from the immediate work site. The Contractor will not be permitted to store machinery, equipment, or materials on public roads overnight. Any costs in connection with the above mentioned Works are incidental.

E17.2 Unless otherwise specified the Contractor shall restore all areas which have been disturbed by his operations to as good as or better than original condition including removal of all construction debris, repair all vegetation, sod, concrete pavement, concrete curbs, concrete sidewalk and asphalt paving to remain etc. to the satisfaction of the Contract Administrator. Any costs incurred in connection with the above mentioned Work are incidental to unit prices bid under this contract.

E17.3 Total Performance of the Work shall not be attained until the Contractor has cleaned up the Site and has removed all tools, equipment, waste, debris and surplus foundation earth to the satisfaction of the Contract Administrator. Unless otherwise specified, the Contractor shall restore all areas of the Site beyond the established limit of Work, which have been disturbed by the Contractor's operations to as good as or better than the original condition to the satisfaction of the Contract Administrator. The Contractor shall pay all costs associated with this Work.

E17.4 Sod and Topsoil (repair to damaged areas). The Contractor shall install mineral sod and a minimum 75mm compacted thickness of topsoil, as required, and in accordance with CW 3510-R9 and CW 3540-R5.

## SITE DEVELOPMENT

### E18. REMOVALS

#### E18.1 Description

E18.1.1 This Specification is supplemental to CW 3010-R4 and CW 3110-R12.

E18.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as herein specified.

E18.1.3 Work shall include, but not necessarily confined to, the following:

(a) Stockpile suitable, approved material on site for reuse (clean topsoil, clay fill and gravel fill) in a secure location. Remove and legally dispose of unsuitable material. Stockpile location to be restored to original condition following removal and re-use of material;

(b) Remove and legally dispose of existing sand surface, timber edging and base, sand box timbers and sand box play sand as per drawing L1;

#### E18.2 Construction Methods

E18.2.1 The Contractor shall remove existing timber edging and safety sand surfacing in existing play area as shown on Drawing L1.

E18.2.2 All safety sand and timber edging base course, play sand in sand box and sand box timbers shall be removed to full depth to the satisfaction of the Contract Administrator.

E18.2.3 The Contractor shall strip existing sod in area as shown on Drawing L1 and legally remove from Site.

E18.2.4 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 clean fill.

E18.2.5 The Contractor and all sub-contractors shall examine the Site and make themselves familiar with the existing conditions and the nature of the Work to be done.

E18.2.6 Prevent damage to surface or underground utility lines which are to remain. Make good any damage.

E18.2.7 Do not disturb soil within branch spread of trees to remain.

E18.2.8 All extraneous materials to be removed from the Site and disposed of in a safe and legal manner. This specification shall amend and supplement City of Winnipeg Standard Construction Specifications CW 3110-R12.

E18.2.9 Disposal of material shall be understood to mean the hauling of all unsuitable material from the Site and the unloading in a legal manner acceptable to the Contract Administrator. If arrangements are made in advance excavated material may be disposed of on Site at a location designated by the Contract Administrator.

E18.2.10 Contractor must coordinate removals with City of Winnipeg staff who are responsible for the removal and disposal of the existing play equipment (including concrete footings).

E18.2.11 Contractor must coordinate with the Contract Administrator for a site inspection to ensure all removals have occurred.

#### E18.3 Method of Measurement

E18.3.1 Removals and Site Preparation is a lump sum bid item. No measurement will be made for this work

#### E18.4 Basis of Payment

E18.4.1 Removals and Site Preparation and related Work will be paid for at the Contract Lump Sum Prices. The amount to be paid for shall be for completed work, which price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and accepted by the Contract Administrator.

### **E19. EXCAVATION AND GRADING**

#### E19.1 Description

E19.1.1 This Specification shall amend and supplement CW 3110-R12 and CW 3170-R3.

E19.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as herein specified.

E19.1.3 Work shall include, but not necessarily confined to, the following:

- (a) Excavation and grading of the Site shall be undertaken to the design requirements noted on the Drawings and the Specifications, approved on site by the Contract Administrator, to depths as required for each surface;
- (b) Supply and install imported fill in areas as required to ensure positive drainage;
- (c) Excavate, remove and legally dispose of unsuitable subgrade and replace with compacted granular material;
- (d) Finish grading of filled and bermed areas as identified on the Drawings;
- (e) Excavate, remove, legally dispose, rough grade and fill areas where items were removed and will not be replaced.

#### E19.2 Materials

E19.2.1 All fill materials shall conform to CW 3170-R3.

#### E19.3 Construction Methods

E19.3.1 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.

E19.3.2 The Contractor shall construct all sub-grades in accordance with Specification CW 3110-R12. Excavation will be performed as per Section 4.3 of CW 3110-R12. Unsuitable Excavated material shall be disposed of as per Section 3.4 of CW 1130-R2. The Contractor is advised that there may be a surplus of fill on the Site after the design sub-grade level has been achieved. Surplus material will be used on site in locations specified by Contract Administrator. Any surplus material will be legally disposed of in accordance with Section 3.4 of CW 1130-R2.

E19.3.3 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 price bid for removals, excavation and rough grading.

E19.3.4 The Contractor shall excavate topsoil as per Section 4.3 of CW 3110-R12. Topsoil excavation is incidental to the unit price bid for removals, excavation and rough grading.

E19.3.5 The Contractor and all sub-contractors shall examine the Site and make themselves familiar with the existing conditions and the nature of the Work to be done.

E19.3.6 Prevent damage to surface or underground utility lines which are to remain. Make good any damage.

- E19.3.7 The Contractor shall excavate to the design grades shown less the appropriate allowance for surface treatment and shall excavate, remove and dispose of all unsuitable materials of whatever nature encountered.
- E19.3.8 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.
- E19.3.9 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.
- E19.3.10 The Contractor is advised that there may be useable clay and gravel fill on site. All suitable material will be reviewed and approved by Contract Administrator and then re-used on site. The re-use of this material on site may reduce the quantity of imported gravel and clean earth fill required. The Contractor shall re-use existing site material prior to delivering new material to the Site.
- E19.3.11 No direct payment will be made for placing and grading of existing fill as all costs for this Work is incidental to the lump sum price bid for excavation and rough grading.
- E19.3.12 Areas to Fill
- (a) Fill low and excavated areas in sodded areas with excavated clay material (from site excavations or imported as required) free from roots, muskeg, organic or cohesive matter, building debris, waste materials, rubble, rubbish, frozen portions, soluble materials and rocks larger than 25mm (1") in diameter and capable of sustaining plant and seed growth. Compact to 90% S.P.D. in 150mm (6") lifts. Cost of site excavated materials incidental to unit price bid for excavation, rough grading and site grading.
  - (b) Prior to placing fill over existing ground, scarify surface to depth of 150mm. Maintain fill and existing surface at approximately the same moisture content to facilitate bonding.
- E19.3.13 The Contractor shall construct all subgrades in accordance with Specification CW 3110-R12. This 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 (asphalt, concrete, stone chip and limestone paving), and 90% Standard Proctor Density in all other areas disturbed under this Contract unless otherwise indicated
- E19.3.14 Areas of the Site which are to be seeded or sodded are to be excavated to meet the depths as per the drawings and specifications.
- E19.3.15 The Contractor shall construct the sub-grade surface to the depths as shown on the drawings.
- E19.3.16 The Contractor is advised that all excavations, removals, disposal, rough grading, compaction and related Work for construction of sub-base, base course, granular paving and planting areas and sodded areas (adjacent to paved areas) shall be incidental to the unit prices bid for each item as listed in the Schedule of Prices.
- E19.3.17 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 that hold water. The finished surface of all disturbed areas shall be dragged and smoothed in such a manner that there are no loose soil particles greater than 50mm in maximum dimensions.
- E19.3.18 Do not disturb soil within branch spread of trees to remain.
- E19.3.19 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-R10.

- E19.3.20 Excavation and rough grading includes the removal of items as indicated on the Drawings and as directed by the Contract Administrator. Work includes the satisfactory disposal of unsuitable Site material such as clay susceptible to frost-heaving, silts, rock rubble rubbish and any surplus suitable Site material. Do not disturb adjacent items designated to remain in place.
- E19.3.21 All extraneous materials to be removed from the Site and disposed of in a safe and legal manner. This specification shall amend and supplement City of Winnipeg Standard Construction Specifications CW 3110-R12.
- E19.3.22 Disposal of material shall be understood to mean the hauling of all unsuitable material from the Site and the unloading in a legal manner acceptable to the Contract Administrator. If arrangements are made in advance excavated material may be disposed of on Site at a location designated by the Contract Administrator.
- E19.3.23 The Contractor is to coordinate the layout of play area with the Play Equipment supplier / installer to ensure that CSA requirements are met. Final layout of all play spaces has to be approved by Contract Administrator prior to any construction or removal.
- E19.3.24 Excavation should be coordinated with the installation of play equipment so as not to leave an open excavation area subject to ponding water.
- E19.4 Method of Measurement
- E19.4.1 Excavation and Rough Grading work is a lump sum bid item. No measurement will be undertaken for this work.
- E19.5 Basis of Payment
- E19.5.1 Excavation and Rough Grading will be paid for at the Contract Lump Sum price. The amount to be paid for completed work, which price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and accepted by the Contract Administrator.

## **E20. BASE COURSE MATERIAL**

- E20.1 The Specification shall supplement Standard Construction Specification CW 3110-R12 and CW 3130-R2.
- E20.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all 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.
- E20.3 There will be no separate measurement and payment for supply and placement of sub-base. All Work shall be considered incidental to this specification.
- E20.4 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.
- E20.5 There will be no separate measurement and payment for compaction. All Work shall be considered incidental to this specification.
- E20.6 All costs in connection with the testing and approval of base courses shall be considered incidental to this specification.

**E20.7 Method of Measurement/ Basis of Payment**

E20.7.1 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.

**E21. CRUSHED GRANULAR PATHWAY**

**E21.1 Description**

E21.1.1 The specification shall supplement City of Winnipeg specification CW 3110-R12.

E21.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:

- (a) Supply and Installation of granular base course, surface course materials and geotextile, for pathways as indicated on the Drawings.

**E21.2 Material**

E21.2.1 All material shall conform to CW 3110-R12, CW3130-R1 and this Specification. Where the two do not agree, this Specification shall take precedence. All materials supplied under this Specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.

**E21.2.2 Granular Base Course**

- (a) Granular base course material for the pathway shall consist of 150mm of 20mm down crushed limestone and shall conform to CW3110-R10 for crushed limestone base course material.

**E21.2.3 Granular Surface Course for Granular Surface Pathway**

- (a) Granular surface course material for the pathway shall consist of 50mm of crusher fines/ toppings crushed limestone.

**E21.2.4 Geotextile Fabric**

- (a) Geotextile fabric shall be in accordance with CW 3130-R2.

**E21.3 Construction Methods**

E21.3.1 Construction method shall conform to Specification CW 3110-R12 'Sub-grade, Sub-base, and Base Course Construction'.

E21.3.2 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.

E21.3.3 Contractor to layout pathways. Contractor shall be responsible for interpretation of grades and protection of stakes. Layout to be approved by Contract Administrator prior to construction.

**E21.3.4 Sub-Grade**

E21.3.5 Prepare compacted sub-grade to the lines and grades as shown on Drawings. Contract Administrator to review sub-grade preparation prior to placement of granular base.

**E21.3.6 Granular Base**

- (a) Geotextile fabric to be placed between Subgrade and granular base as per CW 3130-R2.
- (b) Place granular base material to the lines and grades as shown on Drawings. Extend base minimum 150mm beyond width of surface course.
- (c) Compact material to a minimum of 95 percent Standard Proctor Density.



- E21.3.7 Granular Surface Course
- (a) Place granular surface course material to the lines and grades as shown on Drawings.
  - (b) Compact material to a minimum of 95 percent Standard Proctor Density.

E21.4 Method of Measurement

- E21.4.1 Granular Surface Pathway shall be measured on an square meter basis. The area to be paid for shall be the total number of square meters that are installed in accordance with this Specification and the Construction Drawings, and as acceptable to the Contract Administrator.

E21.5 Basis of Payment

- E21.5.1 Granular Surface Pathway will be paid for at the Contract Unit Price and measured as specified herein. This price shall be payment in full for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work included in this Specification.

**E22. CONCRETE UNIT PAVERS**

E22.1 Description

- E22.1.1 The specification shall supplement Specification CW 3330 R-5.
- E22.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:
- (a) Supply and installation of base course, bedding sand and supply and installation of unit pavers for areas as indicated on the Drawings .
  - (b) Supply and installation of base course, bedding sand and supply and installation of flagstone pavers for areas as indicated on the Drawings .
  - (c) Supply and installation of Snap Edge.
- E22.1.3 Submit Full size sample of paving stones for Contract Administrator's approval. Deliver samples prepaid to Contract Administrator's business address and Notify Contract Administrator in writing, at time of submission of deviations in samples from requirements of Contract Documents

E22.2 Material

- E22.2.1 Concrete Pavers: Barkman Holland Stone, colour: Desert Buff. Sizes to be 200mm x 100mm x 60mm;
- E22.2.2 Concrete Pavers: Barkman Holland Stone, colour: Charcoal. Sizes to be 200mm x 100mm x 60mm;
- E22.2.3 Flagstone pavers: Black in colour as supplied by Pyramid Landscaping.
- E22.2.4 Crushed granite infill, shall be black , 12mm, crushed granular granite.
- E22.2.5 Bedding sand as per CW 3330-R5;
- E22.2.6 Filler Sand as per CW 3330-R5;
- E22.2.7 Crushed Granular Base shall be as specified in CW3110-R12.
- E22.2.8 150 mm Height "Snap Edge".

E22.3 Construction Methods

- E22.3.1 Excavation for base material shall be in accordance with Specification CW 3110-R12 and to be completed by others.
- E22.3.2 The preparation of sub-grade, granular base shall be in accordance with CW 3110-R12 and the drawings and to be completed by others.
- E22.3.3 Base material to be installed by others.
- E22.3.4 Sand Base to be installed in accordance with CW 3330-R5.
- E22.3.5 Supply and placing of bedding sand shall be incidental to the installation of the paving stones.
- E22.3.6 The paving stones shall be installed in accordance with CW 3330 R5.
- E22.3.7 Paving Stones shall be laid in pattern as indicated on drawings.
- E22.3.8 Flagstone Pavers to be installed in random, puzzle pattern. Gaps between stones shall be no more than 50mm. No stone with any dimension smaller than 200mm shall be used.
- E22.3.9 "Snap Edge" to be installed as per manufacturer's specifications, including all installation hardware in areas as indicated on drawing 2/L4.
- E22.4 Method of Measurement
- E22.4.1 Unit Paving and Flagstone Paving shall be measured on an area basis. The area to be paid for shall be the total number of square meters that are installed in accordance with this Specification and the Construction Drawings, and as acceptable to the Contract Administrator.
- E22.5 Basis of Payment
- E22.5.1 Unit Paving and Flagstone Paving will be paid for at the Contract Unit Prices per square meter. This price shall be payment in full for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work included in this Specification.

## **E23. BOULDER RIPRAP**

- E23.1 Description
- E23.1.1 The specification shall supplement Specification CW 3110-R12, CW3130-R2 and CW3615-R2.
- E23.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:
- (a) Supply and installation of Granite Boulder Riprap and geotextile fabric on as indicated on the Drawings.
- E23.2 Materials
- E23.2.1 All materials shall conform to CW 3110-R12, CW 3130-R2, CW3615-R2 and this Specification. Where the two do not agree, this Specification shall take precedence. All materials supplied under this Specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.
- E23.2.2 It is the Contractor's responsibility to contact the Contract Administrator with a minimum of two (2) days notice to come and approve the riprap material on the truck at the site prior to unloading and installing.
- E23.2.3 Granite Boulder Riprap shall be clean fieldstone of random profile with no cracks or splits. Boulder Riprap shall be light in colour to match existing boulder riprap on site, with

diameters ranging from 300mm to 500mm and shall conform to CW 3615-R2 as per Random Stone Riprap.

E23.2.4 Stone Mulch shall be 12mm crushed black granite placed to a depth of 100mm under Large Boulder Riprap

E23.2.5 Geotextile fabric shall conform to CW 3130-R2.

### E23.3 Method of Construction

#### E23.3.1 Bed for Riprap

(a) The bed for the riprap shall be cleared and trimmed to the lines as shown on the drawings or as stated in the field by the Contract Administrator, prior to the placing of any riprap. The bed shall be excavated to a depth of 150mm below finished grade of adjacent surfaces. No geotextile fabric or riprap shall be placed until the bed has been approved. No riprap shall be unloaded and placed until the boulder material has been approved.

#### E23.3.2 Installation of Geotextile Fabric

- (a) The geotextile fabric shall be installed in width as shown on drawings, in accordance with the manufacturer's recommended procedure. The weed barrier shall be installed with the long dimension parallel to the slope and shall be laid smooth and free of tension, stress, folds, wrinkles or creases.
- (b) Joints in the geotextile fabric shall be overlapped not less than 0.5 metres.
- (c) Securing pins with washers shall be inserted through the fabric at intervals not greater than 1.5 metres along a line 100 mm from both the lowest and highest exterior edge of the geotextile fabric.
- (d) At locations confirmed on site by the Contract Administrator, holes will be cut in geotextile fabric for designated planting. Planting to be protected as riprap is installed.
- (e) The supply and installation of the geotextile fabric pins shall be incidental to the cost of the installation of Boulder Riprap.

#### E23.3.3 Stone Mulch Layer Below Boulder Riprap

(a) Upon installation of the geotextile fabric, stone mulch (100 mm depth) shall be installed prior to placement of boulder riprap.

#### E23.3.4 Placement of Boulder Riprap

- (a) Boulder riprap shall be pushed or rolled into place in such a manner that the larger boulders are uniformly distributed around the planting first and smaller boulders serve to fill the places between the larger boulders. Protect plantings at all time. Sufficient handwork and work/equipment shall be utilized to ensure gaps between boulders are filled to the satisfaction of the Contract Administrator.
- (b) Work to be coordinated with installation of concrete pavers and planting of trees.

### E23.4 Method of Measurement and Basis of Payment

#### E23.4.1 Method of Measurement shall be as follows:

- (a) Boulder Riprap shall be measured on an area basis. The area to be paid for shall be the total number of square meters that are installed in accordance with this Specification and the Construction Drawings, and as acceptable to the Contract Administrator.
- (b) The Contractor is advised that the supply and installation of Stone Mulch and Geotextile Fabric under this section is incidental to the unit prices bid of Granite Boulder Riprap and no separate payment shall be made.

#### E23.4.2 Basis of Payment shall be as follows:

- (a) Boulder Riprap will be paid for at the Contract Unit Prices per square meter as measured as specified herein. This price shall be payment in full for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work included in this Specification and accepted by the Contract Administrator.

## **E24. CHAIN LINK FENCING**

### **E24.1 Description**

- E24.1.1 The specification shall supplement City of Winnipeg specification CW 3550-R2.
- E24.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:
  - (a) Supply and installation of 1.8m height Chain Link Fencing as indicated on the Drawings.

### **E24.2 Material**

- E24.2.1 1800mm height chain link fencing, salvaged fence posts, rails, stretcher bars and galvanized mesh as indicated on the Drawings and directed by Contract Administrator.
- E24.2.2 1200mm height chain link fencing, fence posts, rails, stretcher bars and galvanized mesh as indicated on the Drawings and directed by Contract Administrator.
- E24.2.3 1200mm height chain link fencing, salvaged fence posts, rails, stretcher bars and black coated mesh as indicated on the Drawings and directed by Contract Administrator.

### **E24.3 Construction Methods**

- E24.3.1 New Chain Link Fencing to be installed in accordance with CW 3550-R2 in locations as shown on Drawings

### **E24.4 Method of Measurement**

- E24.4.1 Measurement of Chain Link Fencing shall be made on a linear metre basis and measured as specified herein. The numbers to be paid shall be the total number of linear metres constructed in accordance with the Drawings and Specifications and as measure and accepted by the Contract Administrator.

### **E24.5 Basis of Payment**

- E24.5.1 Payment of Chain Link Fencing will be paid for at the Contract Unit Price which price shall be payment in full for supply and installation of all chain link fencing, posts, associated hardware, concrete footings herein described and for all of the items incidental to the Work included in the specification and shown on the drawings.

## **E25. SITE FURNISHINGS**

### **E25.1 Description**

- E25.1.1 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:
  - (a) Supply and Installation of Benches
  - (b) Supply and Installation of Picnic Tables

- (c) Supply and Installation of Bike Racks
- (d) Supply and Installation of Waste Receptacles

## E25.2 Materials

- E25.2.1 All materials supplied under this specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.
- E25.2.2 Custom Benches shall be as shown and detailed on the drawings. Five (5) copies of Shop Drawings are to be submitted to the Contract Administrator for approval prior to fabrication.
- E25.2.3 Benches shall be "Dumor 105PL" as detailed on the drawings, or approved substitute in accordance with B6.
- E25.2.4 Tables shall be "Dumor Recycled Plastic Pedestal Table, 76" as detailed on the drawings, or approved substitute in accordance with B6.
- E25.2.5 Waste Receptacles shall be Metal Slat Type, as per SCD 119, Product #52501062, or approved substitute in accordance with B6.
- E25.2.6 Bike Racks shall be "Bike Stop Bike Racks Space Saver Plus" as detailed on the drawings, or approved substitute in accordance with B6.
- E25.2.7 Contact for Benches and Tables:  
Neil Buller  
GAT Home Company Ltd.  
289 King Street  
Winnipeg. MB R3B 1J8  
  
Telephone No. (204) 943-5050  
Facsimile No. (204) 947-3800  
Email: [nbuller@mts.net](mailto:nbuller@mts.net)
- E25.2.8 Contact for Waste Receptacles:  
Aaron Lennon  
Supervisor of Central Repair/Manufacturing Facility  
City of Winnipeg  
Fleet Management Agency Division  
Public Works Department  
215 Tecumseh St  
Winnipeg. MB R3E 3S4  
  
Telephone No. (204) 986-5505  
Facsimile No. (204) 986-1248
- E25.2.9 Contact for Bike Racks:  
The Bike Stop  
Box 50 Group 529  
Winnipeg, MB R2C 2Z2  
  
Telephone No (204) 224-3553  
Facsimile No. (204) 224-3626
- ## E25.3 Construction Methods
- E25.3.1 All Work is to be located and installed in accordance with the drawings using approved non-rusting, vandal resistant fasteners to ensure solid, durable, finished Work suitable for the purpose intended. Fasteners and assembly hardware shall be incidental to the Work.
- E25.3.2 All furnishings and fixtures to be installed plumb and true to correct elevations and location, as directed the Contract Administrator. The Contractor shall confirm proposed locations of all Site furnishings with Contract Administrator prior to installation.

- E25.3.3 All furnishings and fixtures to be carefully handled so that no parts will be bent, broken or otherwise damaged. Hammering, which will injure or distort fixture, is prohibited.
- E25.3.4 Install Benches as per Manufacturer's Specifications.
- E25.3.5 Install Tables as per Manufacturer's Specifications.
- E25.3.6 Install Waste Receptacles as per SCD 119. Contractor to secure wire basket to metal slat enclosure with chain and lock until Total Performance review when the City shall provide its own lock and chain for each waste receptacle.
- E25.4 Method of Measurement and Basis of Payment
- E25.4.1 Method of Measurement shall be as follows:
- (a) Site Furnishings will be measured on a per unit basis. The total unit to be paid for shall be the total number of units that are installed in accordance with this Specification and the Construction Drawings, and as acceptable to the Contract Administrator.
- E25.4.2 Basis of Payment shall be as follows:
- (a) All site furnishings will be paid for at the Contract Unit Prices and measured as specified herein. This price shall be payment in full for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work included in this Specification and accepted by the Contract Administrator.

## **E26. TREE PLANTING**

### **E26.1 Description**

- E26.1.1 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:
- (a) Supply and Installation of trees.
- E26.1.2 Reference
- (a) Install trees in accordance with the Canadian Standards for Nursery Stock Current Edition, published by the Canadian Nursery Trades Association, except where specified otherwise.
- E26.1.3 Source Quality Control
- (a) All plant material shall be randomly inspected at the source upon request of the Contract Administrator.
  - (b) Trees are to be grown in nurseries under proper cultural practices as recommended by the Canadian Nursery Trades Association.
  - (c) Only those trees that have been grown for at least the four (4) previous years in local Manitoba nurseries located in an Agriculture Canada Plant Hardiness Zone designation of 2(a or b) or 3(a or b) and within a 250 kilometre radius of Winnipeg, will be accepted. Trees that have grown in plant hardiness zones 1 and 4 or greater will be rejected.
- E26.1.4 Maintenance
- (a) The Contractor shall be responsible for the maintenance of the trees for a period of one (1) year from the date of Substantial Performance. Any areas planted after September 15th, the maintenance period will commence on May 15th of the following year or such date as mutually agreed upon by all parties.

- (b) Water to ensure soil moisture conditions for optimum growth and health of plant material. Ensure watering techniques do not cause erosion.
- (c) Reform damaged watering saucers.
- (d) Remove weeds bi-monthly.
- (e) Replace or re-spread damaged, missing or disturbed mulch.
- (f) For non-mulched areas, cultivate monthly to keep top layer of soil friable.
- (g) If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal regulations. Obtain product approval from Contract Administrator prior to application.
- (h) Apply fertilizer as directed by manufacturer's specifications.
- (i) Remove dead, broken or hazardous branches from plant material.
- (j) Keep trunk protection and tree supports in proper repair and adjustment.
- (k) Remove trunk protection, tree supports and level watering saucers at end of warranty period.
- (l) Remove and replace dead plants and plants not in healthy growing condition. Make replacements in same manner as specified for original plantings.
- (m) Submit monthly written reports to Contract Administrator identifying:
  - (i) Maintenance work carried out.
  - (ii) Development and condition of plant material.
  - (iii) Preventative or corrective measures required which are outside Contractor's responsibility.

#### E26.1.5 Warranty

- (a) The Contractor shall, at his/her expense, warrant the Work against any and all defects or deficiencies resulting from insect infestation, disease and mechanical damage due to improper handling, installation or maintenance, for a period of two (2) years for trees from the date of the Total Performance. Nursery stock damaged by vandalism or reasons beyond the control of the Contractor shall be replaced by the client.
- (b) End-of-Warranty inspection will be conducted by the Contract Administrator.
- (c) The Contract Administrator reserves the right to request material replacement or extend the Contractor's Maintenance responsibilities for an additional one (1) year if, at the end of the Warranty Period, leaf development and growth are not sufficient to ensure future survival of the plant material.

#### E26.1.6 Replacements

- (a) During the Maintenance Period, the Contractor shall remove from Site any plant material that has died or failed to grow satisfactorily as determined by the Contract Administrator and replace as per Specifications within a maximum ten (10) day period from notification.
- (b) Defective plants shall be replaced within three (3) days of notification to the Contractor.
- (c) The Contractor shall extend Maintenance and Warranty on replacement tree for a period equal to the original Maintenance and Warranty Periods.
- (d) The Contractor shall continue such replacement, Maintenance and Warranty until tree is acceptable.

### E26.2 Materials

#### E26.2.1 Planting Soil

- (a) Planting Soil shall consist of black top soil, a fertile friable natural loam containing by volume not less than 4% and no more than 25% of organic matter for clay loams, and

not less than 2% and no more than 25% for sandy loams, with an acidity value ranging from pH 6.0 to 8.0 and capable of sustaining vigorous plant growth. Topsoil is to be free of any mixture of subsoil, clay lumps and free of stones and other extraneous matter. It is not to contain couch or crab grass rhizomes.

#### E26.2.2 Mulch

- (a) Mulch shall be locally available clean bark or wood chip mulch free of leaves, branches and other extraneous matter. The recommended mulch shall consist of chips not less than 15mm not larger than 75mm in size and not more than 20mm thick.

#### E26.2.3 Miscellaneous Materials

- (a) Water shall be potable and free of minerals which may be detrimental to plant growth.
- (b) Stakes shall be metal T-Bar, steel, 40x40x5x2440mm.
- (c) Guying Wire shall be 3mm diameter multi-strand galvanized steel cable.
- (d) Guying Collar shall be plastic tube, 13mm diameter, nylon reinforced.
- (e) Trunk Protection shall be plastic perforated spiraled strip.
- (f) Fertilizer shall be a slow release formulation of low nitrogen and high phosphorus e.g. 10-50-12. Apply quantities at rates stated by product manufacturer.
- (g) Root Ball Burlap shall be 150 g Hessian burlap, biodegradable.
- (h) Wire Baskets shall be horticultural accepted product designed to carry the weight and to contain a burlap-covered root ball. Minimum diameter basket size is to conform to the same minimum diameter of the tree root ball for the respective minimum tree caliper sizes.

#### E26.2.4 Plant Material

- (a) Nomenclature of specified trees is to conform to the International Code of Nomenclature for Cultivated Plants and is to be in accordance with the approved scientific names given in the latest edition of the Standardized Plant Names.
- (b) Trees are to be characteristically developed for their species and structurally sound, well branched, healthy and vigorous and densely foliated when in leaf. The tree is to have a healthy, well developed, fibrous root system which may be verified through a testing procedure that destructively samples one or more randomly selected root balls.
- (c) Trees are to have been root pruned regularly, but not later than one growing season prior to arrival on Site. The Contractor may be required to furnish documentation to the client on their root-pruning program. Trees in excess of 75mm caliper are to have been half root pruned during each of two successive growing seasons, the latter at least, one growing season prior to arrival on Site.
- (d) All parts of the trees, especially the lower branches, are to be moist and show live, green cambium tissue when cut.
- (e) Trees are to have only one, sturdy, reasonably straight and vertical trunk, and a well balanced crown with fully developed leader.
- (f) Trees are to be free of disease, insect infestation, rodent damage, sun scald, frost cracks, abrasions, unhealed scars, scars exceeding 5cm in diameter, major forks or crooks in the trunk, broken branches, or angled leaders. Trees having the above defects will not be accepted by the Contract Administrator.
- (g) Trees having a leader which has developed at a sharp angle to the trunk as a result of pruning or trunk damage will not be accepted.
- (h) Trees exhibiting suppressed, weakly developed branches due to competition from other closely spaced trees in the nursery will not be accepted. Trees exhibiting dead branches will not be accepted.



- (i) Any tree that has come out of dormant stage and is too far advanced will not be accepted unless prior approval obtained. Approval is required for any tree which has been held in cold storage.
- (j) Balled and burlapped trees in excess of a 3m height must have been dug with large firm ball. Roots in root balls must be comprised of 75% fibrous and feeder root systems. Secure root balls with burlap, heavy twine and rope. For trees 75mm or more in caliper, wrap ball in double layer of burlap and drum lace with minimum 10mm diameter rope. Protect root balls against sudden changes in temperature and exposure to heavy rainfall.
- (k) Tree spade dug trees are to be dug with mechanized digging equipment with hydraulic spade. Lift root ball from hole, place in wire basket designed for purpose and lined with burlap. Tie basket to ball with heavy rope. Take care not to injure trunk of tree with wire basket ties or rope.
- (l) Use of collected or native trees is not permitted.

#### E26.2.5 Tree Quantity and Size

- (a) Trees are to be planted at the quantities and caliper listed on the Plant Lists which are shown on the drawings. Any variation from the specified quantity is to be clearly identified on the Schedule of Prices. Any variations to species, size or caliper of specified trees will require a request for approval from the Contract Administrator.
- (b) Any changes in planting locations will be determined on-site by the Contract Administrator.
- (c) The Contractor shall supply trees as indicated in the Schedule of Prices and PLANT LISTS.
- (d) Trees are to conform to the measurements specified in the on drawing PLANT LISTS, except that trees larger than specified may be used if approved by the Contract Administrator.
- (e) Trees are to be measured when the branches are in their normal position. Height dimensions specified are to refer to the main body of the tree and not from branch tip to root base. Where trees have been measured by caliper or diameter, reference is to be made to the diameter of the trunk measured 15cm above the ground as the tree stands in the nursery prior to lifting. Caliper of tree shall be appropriately designed on a permanently fixed tag on one of the branches.

#### E26.2.6 Shipment and Pre-Planting Care

- (a) Coordinate shipping of trees and excavation of holes to ensure minimum time lapse between digging and planting.
- (b) Tie branches of trees securely, and protect trees against abrasion, exposure and extreme temperature change during transit. Avoid binding of trees with rope or wire which would damage bark, break branches or destroy natural shape of tree. Give full support to root ball of trees during lifting.
- (c) Cover tree foliage with tarpaulin, and protect bare roots by means of dampened straw, peat moss, saw dust or other acceptable material to prevent loss of moisture during transit and storage.
- (d) Remove broken and damaged roots with sharp pruning shears. Make clean cuts, and cover cuts over 10mm diameter with a tree wound dressing.
- (e) Keep roots moist and protected from sun and wind. Heel-in trees which cannot be planted immediately in shaded areas and water well.

#### E26.3 Construction Methods

##### E26.3.1 Workmanship

- (a) Location of trees will be staked out or painted on Site by the Contractor. Locations shall be approved by the Contract Administrator prior to installation.
- (b) Coordinate operations. Keep Site clean and planting holes drained. Immediately remove soil or debris spilled onto street pavement, grass or sidewalk.

#### E26.3.2 Planting Time

- (a) Plant deciduous trees during dormant period before buds have broken. Trees noted for spring planting only, must be planted in dormant period.
- (b) Plant only under conditions that are conducive to health and physical conditions of trees.
- (c) Provide planting schedule to Contract Administrator. Extending planting operations over long period using limited crew will not be accepted.
- (d) The Contractor must obtain all above and below ground clearances from all the utilities as well as the appropriate District Operations Branch in a timely manner so as not to jeopardize the schedule of the complete tree planting Contract.

#### E26.3.3 Excavation

- (a) Tree pit to be dug with back hoe.
- (b) Excavate tree pits as indicated by stakes or paint marks.
- (c) Protect bottom of excavations against freezing.
- (d) Remove water which enters excavations prior to planting. Ensure source of water is not ground water and notify Contract Administrator.

#### E26.3.4 Installation

- (a) Planting shall be done during periods of suitable weather conditions and in accordance with locally accepted practice.
- (b) Trees are to be planted within forty eight (48) hours of excavation from the nursery.
- (c) No tree pit is to be left open at the end of the Contractor's Work Day. Planting program is to be planned to ensure that all approved trees delivered to the Site at designated planting locations are installed and thoroughly watered the same day as delivery.
- (d) With balled and burlapped root balls and root balls in wire baskets, burlap shall be loosened and cut away from the top 1/3 without disturbing root ball. Wire shall be cut away and removed from the top 1/3 of the root ball. Burlap or rope shall not be pulled from under root ball. Non-biodegradable wrapping shall be removed.
- (e) After inserting the tree and tamping the root system with topsoil in layer of 150mm, water shall be poured in until the pit is thoroughly soaked. Filling of the hole shall then be completed and the fill-in soil shall be packed firmly around the roots, leaving a concave surface for convenient watering. After filling, the planting shall be watered at frequent intervals.
- (f) Each tree is to have an earth saucer at its base having a diameter as large as the excavation with a 10cm lip formed at the perimeter of the saucer to retain water.
- (g) All nursery stock shall be set plumb in the centre of pits and at levels as shown on the planting details after settlement has taken place.
- (h) Nursery stock shall be faced to give the best appearance or relationship to adjacent structure and to the approval of the The City of his representative. Trees shall be placed equal to depth they were originally growing in nursery.

**E26.3.5 Fertilizing**

- (a) When planting is completed, give surface of planting saucer dressing of fertilizer meeting the requirements of Specification. Mix fertilizer thoroughly with top layer of planting soil and water in well.

**E26.3.6 Trunk Protection**

- (a) Install trunk protection on trees as indicated.
- (b) Install trunk protection prior to installation of tree supports when used.

**E26.3.7 Pruning**

- (a) The Contractor shall provide a licensed Manitoba Certified Arborist for each work crew or work site.
- (b) Employ clean sharp tools and make cuts flush with branch collars. Remove dead and injured branches.

**E26.3.8 Watering**

- (a) Trees are to be watered during the planting procedure as described previously, and once a week thereafter, or more frequently if required, during the growing season.
- (b) A complete record is to be kept of each series of waterings for all planted trees noting: 1) location, and 2) date of watering. This record shall be sent bi-weekly to Scatliff+Miller+Murray Inc. - Fax: (204) 927-3443.
- (c) Apply 40 litres of water per 25mm caliper per application using deep root feeder or low/pressure nozzle and hose. The water stream must not gouge out a hole in the soil and mulch.

**E26.4 Method of Measurement**

- E26.4.1 Installation of trees shall be measured on a per unit basis. The amount to be paid for shall be the total number of trees, shrubs and perennials supplied and installed in accordance with this Specification and the Construction Drawings, and as acceptable to the Contract Administrator.

**E26.5 Basis of Payment**

- E26.5.1 Payment for Installation of trees shall be paid for at the Contract Unit Prices. This price shall be payment in full for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work included in this Specification and accepted by the Contract Administrator.

**E27. TOPSOIL AND SOD**

**E27.1 Description**

- E27.1.1 The specification shall amend and supplement City of Winnipeg specification CW 3510-R9 and CW 3540-R5.
- E27.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:
  - (a) Supply and Installation of imported topsoil, to a minimum 75mm compacted thickness, for areas to be sodded.
  - (b) Supply and Installation of mineral sod as required.

## E27.2 Materials and Construction Methods

- E27.2.1 The Contractor shall install topsoil and sod in areas as shown on Drawings.
- E27.2.2 Eco Sod shall be as supplied by Gusta Sod Farms, or approved substitute in accordance with B6
- E27.2.3 Damaged areas: Restoration of damaged areas other than as outlined above shall be incidental to the Work. No separate payment shall be made. Restoration shall be achieved using sod and topsoil unless otherwise directed by the Contract Administrator.

## E27.3 Method of Measurement

- E27.3.1 Supply, placement and maintenance of topsoil and sod will be measured on a square metre basis. The area to be paid for shall be the total number of square meters placed and maintained in accordance with this Specification and accepted by the Contract Administrator.
- E27.3.2 Quantities of units are based on the proposed design drawings as supplied by the Contract Administrator.

## E27.4 Basis of Payment

- E27.4.1 Supply, placement and maintenance of topsoil and sod will be paid for at the Contract Unit Prices and measured as specified herein. This price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work included in this Specification and accepted by the Contract Administrator.

## **PLAY EQUIPMENT**

### **E28. GENERAL**

- E28.1 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as herein specified.
- E28.2 The Play Equipment Contractor shall be responsible for the final layout of all play equipment (including play structures and components functionally linked to structure and individual play components) and thus the extent of the protective surfacing required to comply with CSA standards.
  - E28.2.1 All playground equipment supplied and the method of installation shall be in accordance with the latest edition of the "National Standard of Canada, CAN/CSA-Z614-07".
  - E28.2.2 The Play Equipment Contractor shall supply the Contract Administrator and the Site Works Contractor(s) with all dimensions and drawings necessary to accurately show the extents of all safety surfacing and non-encroachment zones required to meet CSA standards.
  - E28.2.3 Contractor to submit colour drawing of play equipment, colours and frame with Contract Administrator prior to ordering equipment.
  - E28.2.4 This Work to be coordinated with other Contractor(s) responsible for the excavation of play areas and the supply and installation of concrete curb edging for the containment of protective surfacing. Final layout of all play spaces has to be approved by Contract Administrator prior to any construction or removal.
  - E28.2.5 The coordination and timing of play area development (including excavation of play areas, supply and installation of play equipment, supply and installation of edging and supply and installation of protective surfacing) to be coordinated at the pre-construction meeting.
- E28.3 The Contractor shall obtain all approvals required to conduct work described herein.

**E28.4** Components which are unacceptable are the following:

- (a) Wooden structures;
- (b) Tube (enclosed) slides and crawl tubes;
- (c) Play panels with many small moving parts;
- (d) Cable rides;
- (e) Sand diggers;
- (f) Merry-go-rounds;
- (g) Tire Swings;
- (h) Talk tubes;
- (i) Binoculars / telescopes;
- (j) Barrel rollers; and
- (k) Large number of plastic components.

**E29. PLAY STRUCTURES AND PLAY COMPONENTS**

**E29.1** Description

**E29.1.1** The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified.

**E29.1.2** Play equipment shall be installed in the play areas as shown on the attached Drawings. All play equipment and safety zones to fit within maximum areas of play spaces with the exception of proposed ground-level play components with zero (0) fall height such as play panels.

**E29.2** Materials

**E29.2.1** General

- (a) Play equipment is to be provided by "Playgrounds R Us. Playground design as shown on the drawing is on-file with Playgrounds R Us. Play Equipment includes the following:
  - (i) Custom Heavy Duty PlayBooster by Landscape Structures Inc.
  - (ii) Model #120710A Pod Climber
  - (iii) Model #158997A Pod Climber
  - (iv) Model #120711A Pod Climber
  - (v) Model #158998A Pod Climber
  - (vi) Model #146813A Sky Rail Climber
  - (vii) Model #173753A Eclipse Climber
  - (viii) Model #152179A Saddle Spinner
  - (ix) Model #164075B Double Bobble Rider
  - (x) Custom Wee Planet Climber
  - (xi) Custom Double Oodle Swing

**E29.2.2** Contact for Play Equipment:

Jody McLean  
Playgrounds R Us  
Box 7, Group 582, R.R. 5  
Winnipeg. MB R2C2Z2

Telephone No. (204) 632-7000  
Facsimile No. (204) 632-7421

- E29.2.3 All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all parts and materials.
- E29.2.4 Finishes shall meet or exceed ASTM standards for hardness, adhesion, impact and salt spray resistance. All fabrication cuts, drill holes and weld joints shall be sprayed with a corrosion resistant coating
- E29.2.5 All hardware shall be tamper-proof in design and requiring special tools. It shall be either carbon steel plated with zinc/nickel and iridescent chromate finish or stainless steel. All necessary hardware and tools shall be provided.
- E29.3 Installation
- E29.3.1 Play equipment shall be installed as per manufacturer's specifications and in accordance with the most recent Canadian Standards Association Standards.
- E29.3.2 All posts and other vertical items shall be plumb and true to vertical, if so designed.
- E29.3.3 All decks shall be level, if so designed.
- E29.3.4 Concrete footings/ foundation shall be in accordance with E30.
- E29.4 Method of Measurement and Basis of Payment
- E29.4.1 Method of Measurement shall be as follows:
- (a) Play Structure and Play Components will be measured on a per unit basis. In regard to the play structure, the single unit price shall include all play equipment attached to, or functionally linked to the structure.
- E29.4.2 Basis of Payment shall be as follows:
- (a) Play Structures will be paid for at the Contract Unit Prices, measured as specified herein, which price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and accepted by the Contract Administrator.

## **E30. FOUNDATIONS**

- E30.1 Description
- E30.1.1 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as herein specified.
- E30.1.2 All playground equipment posts, bases and anchors are to be set in concrete footings or piles to ensure stability and prevent frost heaving. An alternative to concrete footings or piles that may be approved includes a welded and secured rail mounting system. The current Standard Construction Specifications of the City of Winnipeg, CW 2160-R7 - Concrete to be used in Underground Works, is to be utilized in the installation of the concrete works for all below ground components.
- E30.2 Materials
- E30.2.1 The specific concrete requirements shall be:
- (a) Sulfate resistant, Type 50 Cement;
  - (b) 28 day compressive strength of 30 Mpa;
  - (c) maximum aggregate size of 20mm, nominal;
  - (d) slump 80 +/- 20mm;
  - (e) maximum water/cement ratio 0.49.
- E30.3 Installation

- E30.3.1 All posts and supports shall be centered in the concrete footing such that there is a complete collar of concrete around each post and support. Where posts are not perfectly centered there should be a minimum of 2" concrete at any point around the post.
- E30.3.2 All concrete footings for play equipment shall be a minimum of three feet (3') depth, or in accordance with Manufacturer's specifications, whichever is greater.
- E30.3.3 All concrete footings for single post swing structure shall be a minimum of eight feet (8') depth, or in accordance with Manufacturer's specifications, whichever is greater.
- E30.3.4 All posts and supports shall be wiped clean of extraneous concrete.
- E30.4 Method of Measurement and Basis of Payment
- E30.4.1 Method of Measurement shall be as follows:
- (a) Foundations shall be incidental to the measurement of Play Structures and Independent Components listed above and as shown on Form B: Prices.
- E30.4.2 Basis of Payment shall be as follows:
- (a) No separate payment shall be made for play equipment foundations.

### **E31. PROTECTIVE SURFACING**

#### **E31.1 General Description**

- E31.1.1 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:
- (a) Supply and Installation of wood fibre safety surfacing and safety sand surfacing.
- E31.1.2 The extent and layout of protective surfacing shall be the responsibility of the Play Equipment Sub-Contractor. The extents and layout of protective surfacing materials shall be provided to the Site Works and Furnishings Contractor prior to the commencement of excavation of play areas.
- E31.1.3 If the Play Equipment Sub-Contractor is unable to install protective surfacing immediately after play equipment is installed, Play Equipment Sub-Contractor shall secure all play areas to prohibit access to the installed play equipment.

#### **E31.2 Materials**

##### **E31.2.1 Wood Fibre**

- (a) Wood Fibre product shall be either Zeager Woodcarpet or Fibar FibarSystem 300 products or substitute acceptable to Contract Administrator.
  - (i) Contact for Woodcarpet:  
Zeagar Bros. Inc.  
4000 East Harrisburg Pike ·  
Middletown, PA 17057  
USA  
  
Ph: (1-888) 346-8524 or (717) 944-7481 ·  
Fax (717) 944-7681  
[sales@zeager.com](mailto:sales@zeager.com)
  - (ii) Contact for FibarSystem 300:  
The Fibar Group LLC  
80 Business Park Drive, Suite 300

Armonk, NY 10504-1705  
USA

Ph: (800) 342-2721  
Fax: (914) 273-8659  
[info@FibarPlaygrounds.com](mailto:info@FibarPlaygrounds.com)

- (b) Wood Fibre surfacing shall include wood fibre, filter cloth, subsurface drainage system and mats for bottom of slides, if applicable.

#### E31.2.2 Construction Methods

- (a) Wood Fibre shall be installed within the play area, to a minimum depth of 300 mm (after compaction) in accordance with CSA standards.
- (b) The installation of the Wood Fibre shall be done immediately after the play equipment has been installed.
- (c) Installation of entire system, including fibre, filter cloth, subsurface drainage and mats shall be done according manufacturer's instructions. Adequate drainage within play equipment area must be ensured as per same.
- (d) During installation, it shall be the responsibility of the Contractor to remove any pieces of wood fibre that are in excess of 150mm (6") in length.
  - (i) The Contract Administrator will have the right to dig random test holes to confirm depth of safety surfacing and that sizing of wood fibre conforms to (d). If wood fibre sizing does not conform, the Play Equipment Contractor will have to rake surfacing and remove the pieces of wood fibre that do not comply to the satisfaction of the Contract Administrator prior to issuing any payment.
- (e) Installation shall be done by equipment sized to suit the Work being done and the Wood Fibre shall be spread by hand as necessary in the immediate vicinity of the play equipment so as not to damage same. The play equipment shall be swept clean to the satisfaction of the Contract Administrator after installation of the Wood Fibre.

#### E31.3 Method of Measurement and Basis of Payment

##### E31.3.1 Method of Measurement shall be as follows:

- (a) Protective Surfacing will be measured on a square metre basis.

##### E31.3.2 Basis of Payment shall be as follows:

- (a) Protective Surfacing will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of square metres, measured as specified herein, which price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and accepted by the Contract Administrator.

### SKATEBOARD POD

#### E32. GENERAL

- E32.1 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other items necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as herein specified.
- E32.2 This Bid Opportunity is not an all-inclusive document and any omissions do not relieve the Contractor of the obligations to provide a fully operational skateboard park.
- E32.3 The Contractor shall be responsible for the final layout of the entire skatepark development and must review the layout on site with the Contract Administrator prior to any construction activity



- E32.3.1 The Contractor shall submit construction drawings complete with stamp from Professional Engineer registered to practice in Manitoba with Contract Administrator prior to any site construction activities.
- E32.3.2 The coordination and timing of skatepark development (including excavation, supply and installation of concrete, steel edging, rails, etc...), to be coordinated at the pre-construction meeting.
- E32.4 The Contractor shall obtain all approvals required to conduct work described herein.

### **E33. SKATEBOARD BASE PREPARATION**

#### **E33.1 General Description**

- (a) Further to CW 3170-R3 and CW 3110-R9, this specification shall cover the base preparation for the Skatepark.

#### **E33.2 Related Work**

- (a) Excavation and Grading as specified in E19  
(b) Sub-surface drainage systems as specified in E34.

#### **E33.3 Materials**

- (a) Geotextile: CW 3130-R1  
(b) Sub-Base: 50mm clean stone  
(c) Base: 18mm clean stone  
(d) Rigid Insulation: Type III and IV Polystyrene / XPS

#### **E33.4 Geotextile Installation**

- (a) A layer of woven geotextile shall be placed overtop of the stripped and compacted subgrade.  
(b) Installation should follow manufacturer's guidelines, with care to protect against tears, folds or wrinkles in the fabric.

#### **E33.5 Base Installation**

- (a) Base materials are to be compacted to 95% Standard Proctor Density.  
(b) Work is to be coordinated with the installation of the sub-surface drainage system.

#### **E33.6 Method of Measurement and Basis of Payment**

- (a) The Contractor is advised that all Work under this section is incidental to the unit prices bid for Skate Pod. No separate payment shall be made.

### **E34. SUB-SURFACE DRAINAGE SYSTEMS**

#### **E34.1 General Description**

- (a) Further to CW 3120-R1, this specification shall cover the sub-surface drainage systems:
- (i) The Skatepark perimeter drain system.
  - (ii) The Skatepark catch basin system.
- (b) This Work shall consist of providing and placing drainage systems as shown on the Drawings. The drainage systems shall be in accordance with these Specifications and in reasonably close conformity with the locations and dimensions as shown on the approved plans. The quantities of drainage system materials as shown may be increased or decreased at the discretion of the Contract Administrator based on actual Site conditions that occur during construction. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the Work.

#### E34.2 Materials

- (a) Skatepark Perimeter Drain Pipe
  - (i) 100mm diameter Big "O" perforated drain pipe complete with filter sock.
- (b) Catch Basins
  - (i) All drain covers in skatepark to have no openings greater than 10mm, and be of exterior grade quality, set flush with concrete surface, including exterior grade caulking to prevent moisture getting below concrete slab.
  - (ii) NDS 300mm catch basin complete with 150mm risers and universal outlets as required, or approved substitute in accordance with B6.
- (c) Outlet Pipe
  - (i) Pipe for drain outlets shall be 150mm diameter high density polyethylene (HDPE) pipe, non-perforated.
- (d) Backfill for Trenches
  - (i) Backfill for perimeter drain shall be 10mm clean pea stone.

#### E34.3 Methods

- (a) The layout of the sub-drain systems are to be marked on Site by contractor and approved by the Contract Administrator.
- (b) Drain Systems
  - (i) Drainage systems are to be installed as shown on the Drawings and as per CW 3120-R1.
  - (ii) Work is to be coordinated with base preparation for Skatepark.
- (c) Catch Basin Drain System
  - (i) Catch Basins are to be installed as per Drawings.
  - (ii) Grate is to be set flush with adjacent finished concrete.
- (d) Connections to Existing Catch Basins
  - (i) Drainage systems are to connect to existing catch basins on Site as indicated on Drawings.
  - (ii) The connections to existing catch basins are as per CW 3120-R1.

#### E34.4 Method of Measurement and Basis of Payment

- (a) The Contractor is advised that all Work under this section is incidental to the unit price bid for Skate Pod. No separate payment shall be made.

### **E35. CONCRETE WORK**

#### E35.1 General Description

- (a) Further to CW 3310-R10, this specification shall cover the supply and installation of concrete for the construction of the Skatepark.

#### E35.2 Reference Standards

- (a) All concrete Work shall be to The City of Winnipeg Standard Construction Specifications and the following:
  - (i) CAN3-CSA A23.1 "Concrete Materials and Methods of Concrete Construction", latest edition.
  - (ii) CAN3-CSA A23.2 "Method of Test for Concrete", latest edition.
- (b) Where discrepancies may occur between Drawings, Specifications and Standards, the highest quality specification shall apply.

#### E35.3 Mix Designs

- (a) (a) Contractor is to submit mix design to Contract Administrator for approval a minimum of one week prior to the first pour.

#### E35.4 Sample Panels

- (a) Test panels for concrete Work will be required prior to authorization for general concrete work within the Skatepark.
- (b) The contractor may choose to construct the test panel within the Contract area but may be required to remove the Work if it does not meet specification for shape and finish.
- (c) The Contractor may choose to construct a smaller panel outside of the Contract area for the purpose of review and approval only.
  - (i) Obtain approval of Contract Administrator for test sections.
  - (ii) Prepare a representative test section of each finish on site in an inconspicuous location, at least one square meter.
  - (iii) The test section must be produced by the same workers who will complete the work.
- (d) The Contract Administrator will utilize a 3m straight edge or other specified device to check for consistent shape over the entire panel. An approved radius template, supplied by the Contractor, will be used to check the shape of the toe of banks. Areas showing irregularities in the finish surface exceeding 3mm shall be removed and replaced by the Contractor. Grinding or rub finishing are not permissible methods of remedying irregularities.

#### E35.5 Materials

- (a) Materials are to comply with CSA A23.
- (b) Cement: Type 10 - Normal Portland cement.
- (c) Aggregates: CW 3310-R10
- (d) Additives: CW 3310-R10.
- (e) Reinforcement: as per Engineer's specifications.

#### E35.6 Formwork

- (a) Forms shall be so constructed that the finished concrete will conform to the shapes, lines grades and dimensions shown on the Drawings.
- (b) "Formply" plywood shall be used for exposed concrete surfaces.
- (c) Walls shall be formed using plastic cone ties. All ties shall be arranged in symmetrical, aligned vertical and horizontal rows. They shall be so arranged that when the forms are removed, no ties shall be within 40-50mm of any exposed surface. Wire ties may be permitted only on light work and shall not be used through surfaces where discolouration will be objectionable. All wall reinforcing shall be continuous at corners and intersections. Corner bars or hooks shall be used.
- (d) All cracks and holes are to be plugged, taped and sealed in forms to withstand pressure and remain watertight.
- (e) Forms are to be designed to permit removal without damage to finish.
- (f) Formwork is to be cleaned and conditioned before each use. Damaged forms are not permitted.
- (g) After removal of plastic cone ties, tie ends are to be treated with rust inhibitive coating. Cement plugs are to be recessed to uniform depth, taking care not to damage surrounding edge of concrete.
- (h) Lumber used in forms shall be free from warp. For any exposed surfaces, it shall be dressed to a uniform width and thickness and be free from loose knots, decay or other defects. For unexposed surfaces and rough work, undressed lumber may be used if means are taken to prevent leakage.

- (i) The inside of forms shall be coated with non-staining mineral oil or other approved liquid or thoroughly wetted (except in freezing weather). Where oil is used, it shall be applied before the reinforcement is placed.
- (j) Care is to be taken to ensure that forms do not become dried and warped before concrete is deposited. Before concrete is placed, forms and reinforcement shall be checked and approved by the Contract Administrator.
- (k) Forms shall not be disturbed until the concrete has adequately hardened. Forms are to be removed in a regular sequence of elapsed time between pour and removal so as to maintain colour consistency.
- (l) All exposed edges of concrete shall have a 25mm radius.

#### E35.7 Shaping Templates

- (a) The shape of the skate-able features is critical to the success of the facility.
- (b) All wooden templates must be prepared in a controlled environment to ensure accuracy and prevent warping. Templates must be approved through shop drawings and numbered to relate to the contract drawings for ease of assembly on site.

#### E35.8 Workmanship

- (a) The Skatepark shall be constructed in accordance with the Drawings approved by a Professional Engineer (Manitoba). Finishing shall produce a first class, smooth surface, free from irregularities or imperfections greater than 3mm from specified surface finishes.
- (b) Curved and flat surfaces are to be screeded using accurately cut screed boards and templates in accordance with Drawing sections.
  - (i) Screeds and templates are to be reinforced and of manageable size to avoid distortion.
- (c) Formed surfaces shall be inspected for defects immediately after removal of formwork. The Contract Administrator will utilize a 3m straight edge or other specified device to check for consistent shape. An approved radius template, supplied by the Contractor, will be used to check the shape of the toe of the bank. Areas showing irregularities in the finish surface exceeding 3mm shall be removed and replaced by the Contractor. Grinding or rub-finishing are not permissible methods of remedying irregularities.

#### E35.9 Tolerances for Concrete

- (a) Variations from level or plumb of wall and slab surfaces:
  - (i) Plus or minus 3mm over 3m distance for all banks and slabs. Level and true concrete panels are extremely important to the safety and 'ride-ability' of the Skatepark.
- (b) Variation in thickness of slabs and walls:
  - (i) Plus or minus 6mm.

#### E35.10 Tolerances for Reinforcing

- (a) Shear and bending tolerance:
  - (i) Straight bars: plus or minus 25mm.
  - (ii) Stirrups, ties or spirals: plus or minus 12mm.
  - (iii) Bents bars – length: plus or minus 12mm.
- (b) Placing tolerance:
  - (i) Place within 6mm with respect to concrete thickness and center to center spacing.

#### E35.11 Joints

- (a) Joints are to conform to Final Design Drawings unless otherwise indicated.
- (b) Saw cuts shall be completed when concrete has sufficiently hardened that cutting can be performed without damaging slabs.

- (c) Expansion joints shall be installed around catch basins and along vertical elements such as walls and ledges.

#### E35.12 Concrete Pouring

- (a) Typically the Skatepark concrete is placed in individual panels and segments to suit the designed, compound surfaces. These are placed in 'leap frog' fashion, allowing 5-7 days for maximum shrinkage to take place before placing intermediate segments.
- (b) Drainage slopes must be planned with care from base of banks, stairs and other elements to drain to edge of skate plaza or to drains.
- (c) When pouring ensure that concrete is mixed and vibrated well along all edges and formwork.

#### E35.13 Curing and Protection

- (a) Slabs shall be kept moist for at least 7 consecutive days after placing unless otherwise approved by the Contract Administrator.
- (b) All concrete shall cure for 28 days prior to allowing any traffic. Protective barriers are to be installed to prevent traffic into the Skatepark.

#### E35.14 Winter Concrete

- (a) Not permitted.

#### E35.15 Finishing Surfaces

- (a) Smooth Finish
  - (i) Concrete finish for banks, ledges and walls shall be a hard trowel finish (12 passes) to produce a smooth, dense surface with no irregularities. Smooth finish is to be non-textural with no exposed aggregate. Flat slabs are to be power trowelled.
  - (ii) For both hand and power trowelled surfaces, on Site test panels are to be done prior to start to establish acceptance and criteria for Skatepark standards.
- (b) Broom Finish
  - (i) Broom finish with a trowel edge shall be used only on non-skateable surfaces. A light broom finish is to be used on stair treads only.
- (c) All exposed horizontal concrete edges must be capped suitably to reduce damage due to skateboards and BMX pegs.
- (d) All edges shall be rounded with a 25mm radius rounding tool unless shown differently on Drawings.
- (e) Concrete surfaces are to be complete and tight against steel grind edges. Proper coping protection to prevent concrete build-up on steel surfaces must be maintained at all times.
- (f) All steel inserts are to be grouted in strict conformance with grout manufacturer's printed instructions.
- (g) Prior to final completion of concrete elements, dress all areas with dressing stone and grinder as directed by Contract Administrator. This will include slab surfaces, edges, control and construction joints, and walls.
- (h) Concrete painting
  - (i) Use paint only approved for exterior concrete use, as required.

#### E35.16 Method of Measurement and Basis of Payment

- (a) The Contractor is advised that all Work under this section is incidental to the unit prices bid for Skate Pod. No separate payment shall be made.

### **E36. MISCELLANEOUS METALS**

#### E36.1 General Description

- (a) This specification shall cover the supply and installation of miscellaneous metal Work including steel grind rails and edges.

#### E36.2 Workmanship

- (a) Metal Work shall be finished straight, even and smooth and free of any defects to sizes specified and required.
- (b) Work shall include all necessary angles, brackets, metal inserts, rivets, anchor bolts, frames, adjusting screws, gaskets and other items necessary for the complete installation of the Work.
- (c) Welding is to be neat, symmetrical, clean and unobtrusive in appearance.

#### E36.3 Reference Standards

- (a) Canadian Institute of Steel Construction (CISC)
- (b) American Society for Testing and Materials (ASTM)
- (c) Canadian Standards Association (CSA)

#### E36.4 Submittals

- (a) Samples of any component, requested by the Contract Administrator, shall be submitted prior to fabrication.
- (b) Shop Drawings shall be submitted for grind rails and grind edges. All dimensions are to be verified prior to fabrication.

#### E36.5 Materials

- (a) Unless detailed or specified otherwise, standard products will be acceptable if construction details and installation meet the intent of the Drawings and Specifications in the opinion of the Contract Administrator.
- (b) All steel to be graded appropriately for heavy use, a zinc rich primer to be used, and repainted once on installed and welds and joints are prepared free of mill scale and other imperfections.
- (c) Work is to be free from defects which impair the strength or durability or which are visible. Work is to be new or best quality, and free from rust, waves or buckles.
- (d) Fasteners: Unless otherwise specified, provide fasteners as follows:
  - (i) Steel anchor bolts to conform to ASTM A307.
  - (ii) Steel bolts and lag screws to conform to ASTM A325.

#### E36.6 Fabrication

- (a) Site measurements are to be taken before fabrication to ensure accurate fitting.
- (b) Weld joints tight, flush, and grind smooth, in true planes with base materials. Make welds continuous.

#### E36.7 Installation

- (a) As per Drawings.
- (b) Install Work plumb, true, square, level, straight, and accurately and tightly fitted together and to surrounding Work.
- (c) Smooth all cut edges and weld joints prior to final painting and ensure that all steel is free from burrs, cracks, defects and other imperfections.

#### E36.8 Method of Measurement and Basis of Payment

- (a) The Contractor is advised that all Work under this section is incidental to the unit prices bid for Skate Pod. No separate payment shall be made.

## **E37. JOINT SEALANT**

### **E37.1 General Description**

- (a) Further to CW 3310-R10, this specification shall cover the supply and installation of joint sealants for concrete.

### **E37.2 References**

- (a) Conform to CAN2-19.13-M82.

### **E37.3 Submittals**

- (a) Provide samples of manufacturer's product brochures and product names, range of colours in each type of sealant for selection by Contract Administrator.

### **E37.4 Warranty**

- (a) Promptly correct, at no expense to City, any defects or deficiencies which become apparent within warranty period. Defects shall include, but shall not be limited to, sag and failure in adhesion or cohesion, air and moisture leakage, hardening, running, sagging, change of colour, crumbling, melting, bubbling, and staining of adjacent materials.

### **E37.5 Environmental Conditions**

- (a) Do not apply any sealant at ambient temperatures below 5°C without consulting manufacturer and obtaining Contract Administrator's approval. Apply only to completely dry surfaces.

### **E37.6 Materials**

- (a) All sealants utilized in the sealant system shall be compatible.
- (b) Provide sealant formulation recommended by the manufacturer for the type of joint, substrate and service conditions applicable.
- (c) Colours: charcoal/grey so as to blend with surround concrete features.
- (d) Sealant Type A: Multi-component, polyurethane base, chemical curing, CAN2-19.24-M80, Dymeric by Tremco Ltd., 220 Wicksteed Ave., Toronto, (416) 421-3300, or approved substitute in accordance with B6.
- (e) Sealant Type B: Self-levelling, multi-component, polyurethane base, chemical curing, THC-900 and THC 900 Joint Primer by Tremco Ltd., 2200 Wicksteed Ave., Toronto, (416) 421-3300, or approved substitute in accordance with B6.
- (f) Sealant Backing: Extruded, foamed, closed cell, round, polyethylene urethane, neoprene or vinyl rod, 30% greater diameter than joint width, with Shore 'A' hardness of 20 and 830 – 900 KPa tensile strength, and manufactured especially for the purpose.
- (g) Expansion Joint Filler: Preformed PVC closed cell, Rodofoam by Sternson Canada Limited, or approved substitute in accordance with B6.
- (h) Joint Primer: As recommended by sealant manufacturer for type of surface being primed.

### **E37.7 Preparation**

- (a) Clean joints and spaces which are to be sealed and ensure that they are dry and free of dust, loose mortar, oil, grease and other foreign material. Clean ferrous metals of all rust, mill scale and foreign materials by wire brushing, grinding or sanding.
- (b) Wipe all metal surfaces to be sealed, except pre-coated metals, with cellulose sponges or clean rags soaked with ethyl alcohol, ketone solvent, xylol or toluol and wipe dry with clean cloth. Where joints are to be sealed with silicone based sealants clean joint with methylethyl-ketone (MEK) only. Clean pre-coated metals with solutions or compounds which will not injure finish and which are compatible with joint primer and sealant. Check that ferrous metal surfaces are painted before applying sealant.
- (c) Examine joint sizes and correct to achieve proper width/depth ratio and as per drawings:

- (i) 6 mm x 6 mm minimum joint size
  - (ii) 6 mm to 12 mm depth shall equal width
  - (iii) 12 mm to 50 mm depth equal 1/3 of width or 12 mm whichever is less
- (d) Install joint backing or apply bond breaker tape to achieve correct joint depth.
- (e) On horizontal traffic surfaces, support joint filler against vertical movement which might result from traffic loads, including foot traffic.
- (f) Where surfaces adjacent to joints are likely to become coated with sealant during application, mask them prior to priming and sealing.
- (g) Prime sides of joints, if priming is recommended by sealant manufacturer for type of surface being sealed.
- (h) Check form release agent used on concrete for compatibility with primer and sealant. If they are incompatible inform Contract Administrator and change primer and sealant to compatible types approved by Contract Administrator or clean concrete to Contract Administrator's approval.

#### E37.8 Application

- (a) Apply sealant using air or hand operated guns fitted with suitable nozzles and equipment approved by sealant manufacturer. Apply in strict accordance with manufacturer's directions and recommendations.
- (b) Apply sealant under pressure to assure good adhesion to sides of joints and to completely fill all voids in joint.
- (c) Form surface of sealant smooth, concave, free from ridges, wrinkles, sags, air pockets and embedded foreign matter.
- (d) Upon completion, remove masking, sealant smears and droppings from adjacent and other surfaces.
- (e) Use one of sealants specified for each type in following locations. Ensure that sealant chosen for each location is recommended by manufacturer for use for conditions encountered.
- (i) Type A: Vertical joints in exterior concrete surfaces; joints in paving; and all other locations where sealing is required except in locations designated for Type B and except where sealing specified in other Sections.
  - (ii) Type B: Joints in exterior horizontal concrete surfaces.

#### E37.9 Method of Measurement and Basis of Payment

- (a) The Contractor is advised that all Work under this section is incidental to the unit prices bid for Skate Pod. No separate payment shall be made.

### **E38. FOUNDATIONS**

#### E38.1 General Description

- E38.1.1 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as herein specified.

#### E38.2 Materials

- E38.2.1 The specific concrete requirements shall be as designed by registered Professional Engineer (Manitoba).

#### E38.3 Installation

- E38.3.1 All foundation work to be built as per design by registered Professional Engineer.



**E38.4 Method of Measurement and Basis of Payment**

- (a) The Contractor is advised that all Work under this section is incidental to the unit prices bid for Skate Pod. No separate payment shall be made