



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 444-2011

FRONTENAC PARK PLAYGROUND REDEVELOPMENT

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 FRONTENAC PARK PLAYGROUND REDEVELOPMENT

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, June 2, 2011.

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. ENQUIRIES

B3.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.

B3.2 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.

B3.3 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.

B3.4 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.

B3.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B4. ADDENDA

B4.1 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.

B4.2 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.

B4.2.1 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>

B4.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B4.2.3 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.

B5. SUBSTITUTES

B5.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.

- B5.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B5.3 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.
- B5.4 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.
- B5.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B5.6 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.
- B5.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B5.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B5.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B15.
- B5.9 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.
- B5.10 Notwithstanding B5.2 to B5.9, and in accordance with B6.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B15.1(a).

B6. BID COMPONENTS

- B6.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices;

- (c) Design Drawings (plan, perspective, and other submissions to illustrate the design intent) in accordance with B9;
- (d) Component List and Description in accordance with B10.

B6.2 Further to B6.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B5.

B6.3 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.

B6.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.

B6.5 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

B6.5.1 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.

B6.6 Bidders are advised not to include any information/literature except as requested in accordance with B6.1.

B6.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B15.1(a).

B6.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.

B6.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B6.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

B7. BID

B7.1 The Bidder shall complete Form A: Bid, making all required entries.

B7.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

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

B7.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.

- B7.3 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.
- B7.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
 - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B7.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B7.4.2 All signatures shall be original.
- B7.5 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.

B8. PRICES

- B8.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- (a) Notwithstanding C12.2.3(c), prices on Form B: Prices shall include the Manitoba Retail Sales Tax (MRST, also known as PST), but exclude GST.
- B8.2 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.
- B8.3 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.
- B8.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B9. DESIGN DRAWINGS

- B9.1 The Bidder shall submit drawings, which illustrate the proposed design and play equipment, such as plan, perspective, and any other submissions to illustrate the design intent. Additional drawings may be requested prior to award for more detailed evaluation. Drawings shall be a maximum size of 11 x 17".

B10. COMPONENT DESCRIPTION

- B10.1 The Bidder shall submit an itemized component list complete with description of each component and / or graphic or catalogue reference outlining specifications of play equipment components. The component list shall be separate from the design drawings.

B11. QUALIFICATION

- B11.1 The Bidder shall:

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

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

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

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

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

B11.4 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B11.5 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B12. OPENING OF BIDS AND RELEASE OF INFORMATION

B12.1 Bids will not be opened publicly.

B12.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>

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

B12.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B13. IRREVOCABLE BID

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

B13.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.

B14. WITHDRAWAL OF BIDS

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

B15. EVALUATION OF BIDS

- B15.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity or acceptable deviation there from (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B11 (pass/fail);
 - (c) Total Bid Price (10 points) pursuant to ;
 - (d) Design Drawings and Component Description (90 points) pursuant to ;
 - (e) economic analysis of any approved alternative pursuant to B5.
- B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.
- B15.4 Further to B15.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices adjusted, if necessary, as follows:
- B15.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.
- B15.4.2 Further to B15.1(c), 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.
- B15.4.3 Further to B15.1(c), the Award Authority may reject a Bid as being non-responsive if it exceeds the budget as shown on Form B: Prices.

- B15.4.4 The Total Bid Price shall be evaluated with a weighting of 10 points out of a total of 100 possible points. As such, the lowest Bidder shall receive the full 10 points, and the second lowest Bidder and subsequent Bidders shall be pro-rated accordingly.
- B15.5 Further to B15.1(d), Design Drawings shall be evaluated with a weighting of 90 points out of a total of 100 possible points. Design Drawings will be evaluated considering the Bidder's Bid Submission and any other information required.
- B15.5.1 The Design shall be evaluated on the following criteria:
- (a) compliance with CSA Standards applicable, including the age appropriate standards (pass/fail);
 - (b) play value (maximum 40 points)
 - (i) 10 points - Variety of activities provided;
 - (ii) 10 points - Variety of access points & egress points;
 - (iii) 10 points - Provides opportunities for social / interpersonal interaction and cooperative play;
 - (iv) 10 points - Provides for fine and gross motor and sensory development;
 - (c) Designed for inclusive play using Universal Design principles (maximum 15 points)
 - (i) Complies with section 4.5.4 of the City of Winnipeg Accessibility Design Standards (www.winnipeg.ca/ppd/pdf_files/Access_Design_Standards.pdf) (pass/fail);
 - (ii) 5 points - Layout of the play area for integration of the wheelchair accessible components to promote inclusive play;
 - (iii) 5 points — Layout of the play area and inclusion of components that promote inclusive play for people with visual impairment.
 - (iv) 5 points – Nature and quality of the accessible play events associated with the structure
 - (d) Layout/circulation (maximum 20 points)
 - (i) 5 points - Efficient use of space within and between play elements;
 - (ii) 5 points - Flow and relationship between play area activities;
 - (iii) 5 points - Layout / orientation of components on site and in relation to park entrances;
 - (iv) 2 points - slide orientation (metal facing north);
 - (v) 3 points – optimize visual access into and within the play are for security purposes;
 - (e) Durability (maximum 15 points)
 - (i) Use of durable / tamper-resistant materials, low maintenance finishes and connector systems, and ease of repair / replacement of the products used in the playground area.
- B15.6 Further to B15.5.1(a), if Contractor states play equipment components are compliant with CSA Standards which are not, liquidated damages shall be charged as per D17 should this result in additional design and/or meeting time on the part of the Contract Administrator.
- B16. AWARD OF CONTRACT**
- B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

- B16.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B16.2.1 Without limiting the generality of B16.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Bid is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B16.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the Bid which receives the most points in the evaluation, in accordance with B15.
- B16.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.
- B16.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B16.5 The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

PART C - GENERAL CONDITIONS

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
- 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 renovation of the playground in Frontenac Forest Park.

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

- (a) Prepare existing grade and supply and install wood timber/pedra play curb/retaining wall;
- (b) Supply and installing the new play equipment;
- (c) Supply and installing the new wood fibre surfacing;
- (d) Supply and install new site furniture;
- (e) Supply and install Crusher Fines Paving;
- (f) Supply and install topsoil and sod;
- (g) Supply and install Trees;
- (h) Maintenance of the sod and trees.

D2.3 Contractor is advised that work by others, including the construction of pathways, may be taking place on site that that work in this Contract may need to be staged in order to facilitate this other work.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is Dean Spearman Landscape Architect, represented by:

Dean Spearman
83 Lafayette Bay, Winnipeg, Manitoba R3T 3J9
Telephone & Fax No. (204) 261-4137
Email. dean@spearman.mb.ca

D4. CONTRACTOR'S SUPERVISOR

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

D5. NOTICES

D5.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.

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

The City of Winnipeg
Chief Financial Officer

Facsimile No.: (204) 949-1174

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

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

Facsimile No.: (204) 947-9155

SUBMISSIONS

D6. AUTHORITY TO CARRY ON BUSINESS

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

D7. SAFE WORK PLAN

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

D8. INSURANCE

- D8.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg and Dean Spearman Landscape Architect added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- D8.2 Deductibles shall be borne by the Contractor.
- D8.3 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement

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

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

D9. PERFORMANCE SECURITY

D9.1 If the Contract Price exceeds one hundred thousand dollars (\$100,000.00), 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.

D11. DETAILED WORK SCHEDULE

D11.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D11.2 The detailed work schedule shall consist of the following dates:

- (a) start date;
- (b) date site excavation complete;
- (c) arrival of play equipment to Site;
- (d) excavation of holes for play equipment posts & concrete pouring for posts;
- (e) Installation of play curb/retaining wall;
- (f) Installation of safety surfacing;
- (g) installation of crusher fines paving & topsoil and sod;
- (h) expected completion.

D11.3 Other milestone dates appropriate to this project should also be included to make the Contract Administrator aware of them.

D12. SHOP DRAWINGS

- D12.1 The Contractor shall provide the Contract Administrator with an electronic CAD file in DWG format showing the finalized play structure and other play elements and identifying all components. This file shall be provided within five (5) days of receipt of the purchase order or letter of intent, which ever is received earlier.
- (a) If the dwg file has x-refs these shall be bound or the x-ref files provided.
 - (b) If the dwg file uses colours by line weight a 'ctb' file shall be provided.
 - (c) The dwg file shall not use shape (shx) fonts but shall use true type fonts exclusively.

D13. ORDERING OF PLAY EQUIPMENT

- D13.1 The Contractor shall provide the Contract Administrator evidence, to the satisfaction of the Contract Administrator, of having ordered all play equipment necessary to complete the work from the manufacturer/supplier within seven (7) calendar days of receipt of the purchase order or letter of intent, which ever is received earlier.

SCHEDULE OF WORK

D14. COMMENCEMENT

- D14.1 The Contractor shall not commence any Work until he is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.
- D14.2 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;
 - (vi) the Subcontractor list specified in D10; and
 - (vii) the Detailed Work Schedule list specified in D11;
 - (viii) the Shop Drawings specified in D12;
 - (ix) the evidence of Ordering the Play Equipment specified in D13; and
 - (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.
- D14.3 The Contractor shall commence the Work on the Site within fifty (50) Working Days of receipt of the Purchase Order.

D15. SUBSTANTIAL PERFORMANCE

- D15.1 The Contractor shall achieve Substantial Performance within fifteen (15) consecutive Working Days of the commencement of the Work as specified in D14.
- D15.2 Working Days shall not be counted until the first day that meets the conditions for a working day after the time period noted in D14.3 has passed or the Contractor begins work on the Site, whichever shall come first.
- D15.3 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D15.4 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D16. TOTAL PERFORMANCE

D16.1 The Contractor shall achieve Total Performance within twenty (20) consecutive Working Days of the commencement of the Work as specified in D14.

D16.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D16.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D17. LIQUIDATED DAMAGES

D17.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City five hundred dollars (\$500.00) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.

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

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

D18. SCHEDULED MAINTENANCE

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

- (a) Sod Maintenance as specified in CW-3510;
- (b) Tree Maintenance as specified in E15.

D18.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

CONTROL OF WORK

D19. JOB MEETINGS

D19.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.

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

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

D20.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

MEASUREMENT AND PAYMENT

D21. INVOICES

D21.1 Further to C12, the Contractor shall submit an invoice for each order delivered to:

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

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

D21.2 Invoices must clearly indicate, as a minimum:

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

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

D21.4 Bids Submissions must be submitted to the address in B6.5.

D22. PAYMENT

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

WARRANTY

D23. WARRANTY

D23.1 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. 444-2011

FRONTENAC PARK PLAYGROUND REDEVELOPMENT

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. 444-2011
FRONTENAC PARK PLAYGROUND REDEVELOPMENT

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/matmgmt/Spec/Default.stm>
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
L-PG-1	Site Context
L-PG-2	Tree Protection Plan
L-PG-3	Demolition Plan
L-PG-4	Playground Scope Plan
L-PG-5	Playground Layout Plan
L-PG-6	Play Curb Elevations
L-PG-7	Play Curb and Retaining Wall Isometric
L-PG-8	Play Curb Details A
L-PG-9	Play Curb Details B
L-PG-10	Playground Details
L-PG-11	Multiflo and Sod Details
SCD-119	Waste Receptacle Metal Slat Type
SCD-718B	Bilingual Park Sign
SCD-517	Standard Detail for Tree Planting

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. EXISTING SERVICES AND UTILITIES

- E3.1 No responsibility will be assumed by the City or the Contract Administrator 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 and the Contract Administrator 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.

E4. ACCESS TO SITE

- E4.1 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.

E4.2 The Contractor's operations shall be limited to the minimum area necessary for undertaking the Work and he shall be responsible for all damage resulting from his Work on private or public property.

E5. DAMAGE TO EXISTING STRUCTURES, TREES AND PROPERTY

E5.1 All necessary precautions shall be exercised by the Contractor so as not to remove, disturb, or damage any existing trees, shrubs, sod, pavements, streets, roads, boulevards, poles, hydrants, water pipes, gas pipes, electrical wires, cables, conduits, sewers or other existing facilities and equipment at the Site of the Work. For all damage incurred in the performance of the Work (either directly or indirectly), the Contractor shall either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to the Contract Administrator, and the cost of which shall be borne entirely by the Contractor. The Contractor shall also indemnify and save harmless the City and the Contract Administrator from all claims made directly or indirectly against it in respect to any such damage.

E6. PERMITS, NOTICES, LICENCES, CERTIFICATES, LAWS AND RULES

E6.1 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.

E6.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.

E6.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.

E6.4 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Act.

E6.5 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Fall Protection guidelines.

E6.6 The Contractor and Sub-contractors must be fully aware of all Work involving hazardous materials. All Work must be performed in compliance with the Manitoba Department of Labour Workplace Health and Safety Guidelines and all other applicable codes. The Contractor is responsible for the immediate notification to the Contract Administrator of his/her encountering of suspected hazardous material during their course of Work.

E7. PEDESTRIAN SAFETY AND TRAFFIC MANAGMENT

E7.1 Further to CW 1130-R1, the Contractor shall take such measures as are necessary to ensure safe and convenient pedestrian ingress and egress is maintained to private properties while he is Working near them. Any damage caused by the negligence of the Contractor or his SubContractors to the adjacent Works or properties, shall be promptly repaired by him at his own expense, to the satisfaction of the Contract Administrator.

E7.2 Ambulance/ Emergency vehicle access must be maintained at all times.

E8. PROTECTION OF THE SURVEY INFRASTRUCTURE

E8.1 Nonwithstanding CW 1130 3.14 'Protection of Survey Infrastructure' of the Standard Construction Specifications, 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.

E8.2 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 918-1360 (8:00

a.m. to 4:00 pm Monday to Friday excluding holidays) to obtain 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.

- E8.3 Where a survey post, bar, or control monument lies in the line of 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.
- E8.4 Outline survey monuments and geodetic control monuments at or adjacent to the Site, not in 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 \$1000 per bar and \$3000 per control monument. Contractors must ensure SubContractors are aware of this clearance procedure and the potential restoration costs.
- E8.5 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.

SITE WORK

E9. TREE PROTECTION

- E9.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing park trees within the limits of the construction area.
- The Contractor shall not stockpile materials and soil or park vehicles and equipment within 2 metres of trees.
 - Trees identified to be at risk by the Contract Administrator are to be strapped with 25x100x2400 wood planks, or suitable protection as approved by the Contract Administrator. Said protection is to be maintained until Total Performance.
 - 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), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
 - Operation of equipment within the drip line of the trees shall be kept to a 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 drip lines of trees. The drip line 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.
- E9.2 Where tree protection fencing is called for the Contractor shall install orange safety fencing with a minimum height of 1.2m using t-rail metal stakes at a maximum spacing of 2 m o.c.. Safety fencing shall be securely fastened to the trail stake.
- E9.3 Contractor shall maintain tree protection fence until such time as construction is sufficiently well progressed as to ensure that vehicular traffic and movement of heavy materials is no longer necessary to complete the remaining works.
- E9.4 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/her designate.
- E9.5 Tree protection shall be paid for at the rate identified for tree protection in item 1 Tree Protection Fence of Form B:Prices.

- (a) Said payment shall be 50% in the payment certificate following installation with the remaining 50% deemed to be for the maintenance of said protection for the duration of the construction and paid following removal of the protection and Total Performance.

E10. DEMOLITION AND REMOVALS

- E10.1 This section shall cover the removal of existing safety surfacing as well as existing play equipment and site furnishings where scheduled for removal. It shall also cover any other demolition and removal necessary to construct the project which may be considered incidental to other items of Work.
- E10.2 To the extent and limits shown on the Drawings, where the existing surfacing is to be removed, it is to be removed in its entirety.
- E10.3 Removal of items designated for removal on sheet L-PG-3 shall be included in item 2 on Form B; Prices and shall be paid for as part of that lump sum item.
- E10.4 There shall be no separate measurement and payment for demolition and removals item not scheduled on sheet L-PG-3 with these items being considered incidental to other aspects of the work.

E11. EXCAVATION, EARTHWORK AND GRADING

Description

- E11.1 This specification shall cover all clearing and grubbing, excavation, stockpiling of topsoil, removal or supply and placement of materials necessary to achieve the grades and drainage patterns documented in the Drawings at the sub grade (mud grade) level.
- E11.2 This specification is supplemental to CW 3010 , CW 3110 and CW 3170. Materials and installation are to conform to these standard Specifications.

Construction Methods

- E11.3 Clearing and grubbing operations are to be completed to the satisfaction of the Contract Administrator prior to the beginning of Earthwork and Grading.
- E11.4 Grading operations are to be conducted to ensure adequate subcut to install surface materials and structures as detailed on the drawings while still ensuring positive drainage of the finished project.
- E11.5 Grading in the play equipment area is to be as per the drawings provided to create the rough grades needed to establish the curbs and play surface at the elevations indicated on L-PG-6.
- E11.6 Subgrade shall be completed and accepted by the Contract Administrator prior to the installation of other works.

Method of Measurement and Basis of Payment

- E11.7 There will be no separate measurement or payment for stockpiling of topsoil, clearing and grubbing operations.
- E11.8 There shall be no separate measurement of payment for excavation and the supply or removal of fill material required for installation of sod, site furniture, curb, and crusher fines paving to the elevations indicated as it shall be considered incidental to the supply and installation of those items.
- E11.9 Excavation and the supply or removal of fill material required for installation of play surfacing shall be measured and paid for at the contract unit price per square meter for Item 3 Excavation and Grading on Form B: Prices.

E12. SUB-SURFACE DRAINAGE

General Description

E12.1 This Work shall consist of providing and placing a geocomposite prefabricated drain system as described in the drawings. The drainage system shall be installed in accordance with these Specifications and in reasonably close conformity with the locations and dimensions as shown on the drawings or specified by the Contract Administrator. The quantities of drain as shown on the drawings may be increased or decreased at the direction of the Contract Administrator based on actual Site conditions that occur during construction of the project. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the Work. This drainage is in addition to any subsurface drainage called for by the manufacture of the play safety surfacing and is intended only to supplement and provide an outlet for said drainage.

Materials

E12.2 The drain conduit shall be of flexible, prefabricated, rounded rectangular shaped, composite product. The drain conduit shall be wrapped with a non-woven geotextile and shall be a non-woven needle-punched construction and consist of long-chain polymeric fibers composed of polypropylene, polyethylene or polyamide. The fibers shall be oriented into a multi-directional stable network whereby they retain their positions relative with each other and allow the passage of water as specified. The fabric shall be free of any chemical treatment or coating, which reduces permeability and shall be inert to chemicals commonly found in soil. The geotextile shall conform to the following minimum average roll values.

Weight	ASTM D-3776	3.0 - 4.0
Tensile Strength	ASTM D-4632	100 - 130
Elongation %	ASTM D-4632	50 - 70
Puncture, lb	ASTM D-751	35 - 60
Mullen Burst, psi	ASTM D-3786	110 - 215
Trapezoidal Tear, lb	ASTM D-4533	40 - 42
Coefficient of Permeability	ASTM D-4491	.2 - .4 cm/sec
Flow Rate, gpm/ft ²	ASTM D-4491	100 - 140
Permittivity, 1/sec	ASTM D-4491	1.3 - 2.0
Apparent Opening Size	ASTM D-4751	60/70 Max. US Std Sieve Opening
Seam Strength, lb/ft	ASTM D-4595	100
Fungus	ASTM G-21	No growth

E12.3 The drainage core shall be made of a high-density polyethylene. The core shall be constructed using interconnected corrugated pipes that define and provide the flow channels and structural integrity of the drain. The geotextile shall function only as a filter. The core of the edge drain shall conform to the following physical property requirements.

Thickness, inches	ASTM D-1777	1.0
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Flow Rate, gpm/ft***	ASTM D-4716	30
Compressive Strength, psf	STM D-1621 (modified sand method)	6000
Pipe Stiffness, pii	ASTM D-2412	100

*** At gradient = 0.01, pressure = 10 psi for 100 hours.

- E12.4 The fittings used with the edge drain shall be of a "snap together" design. In no case shall any drainage product be joined without the use of the manufacturers connector designed specifically for the purpose.
- E12.5 Drainage pipe shall be Multi-Flow or approved substitute in accordance B6. Size shall be 150 mm. All fittings shall be sized to fit approved for use with Multi-Flow or approved substitute in accordance with B6. Cleanouts shall be provided as indicated on the drawing and at each intersection.
- E12.6 Where specified the emitter shall be NDS #421 or approved substitute in accordance with B6.
- E12.7 Pipe for edge drain outlet laterals shall be either PVC pipe meeting the requirements of ASTM D-2729 or ASTM F-949, or high-density polyethylene pipe meeting the requirements of AASHTO M252. 2.4 A rodent screen made of 7.6 mm by 7.6 mm square opening size, 1.6 mm gauge, stainless steel or galvanized, welded wire mesh shall be installed in each outlet lateral line. When using galvanized welded wire mesh, the rodent screen shall be galvanized after it has been formed to the shape and dimensions required.
- E12.8 Backfill shall be course sand whose particle size is defined as less than 5% retained on a #10 screen, and less than 5% passing through a # 30 screen. (US Std Sieve) In no case shall more than 1% pass a #60 screen.

Construction Methods

- E12.9 Installation of Subdrain is not to proceed until after the excavation/grading has been approved by the Contract Administrator.
- E12.10 The layout of the subdrain is to be marked on Site and approved by the Contract Administrator prior to trenching.
- E12.11 Trenches are to be excavated with a trenching machine or by hand. Locations where the trench has to cross existing utilities, existing irrigation pipes and all other subsurface pipes or fixtures are to be excavated by hand. The amount of trench excavated at any time shall not exceed the amount of drain that can be set and backfilled completely prior to the end of that Working Day. Trench shall be of the width specified on the Drawings.
- E12.12 The bottom surface of the trench is to be free of loose particles and is to have the slope shown on the Drawings. Over excavation in the bottom of the excavation shall be backfilled to the proper grade with excavated material or sand prior to the placement of the drain. Where sand or excavated material is used to fill the trench to the proper elevation that material shall be compacted to 95% of standard proctor density using appropriate means. Where the trench is to pass through an area of existing sod the excavated material is not to remain on the grassed surface for a period longer than 24 hours. Excavated material if not required as fill elsewhere on Site shall be removed from Site and disposed of legally.
- E12.13 Multi-Flow drain pipe is to be placed in trench using Multi-Flow centering device. Trench is to be backfilled with coarse sand to the surface. Backfill shall be placed in maximum of 45 cm loose lifts. Backfill is to be lightly tamped into place and watered. In the case of trenches extending into existing grassed areas course sand backfill is to be seeded with grass seed.
- E12.14 Contractor is to maintain top surface of the backfilled sand even with the surrounding grade during the grow in phase.

- E12.15 Fittings for the drain shall be installed in accordance with the manufacturer's recommendations.
- E12.16 Any damaged edge drain or outlet lateral shall be replaced or repaired by splicing in an undamaged section of drain at the Contractor's expense.
- E12.17 Where the Multi-flo pipe is to connect into a catch basin the connection to the catch basin shall be below the ground surface and re-grouted. Prior to completing the project the Contractor shall clean out the catch basin of all debris
- E12.18 Where the Multi-flo pipe is to connect to an existing system or device with a 75mm or 100 mm diameter round connector the connection shall be made with the manufacturers adaptor sized appropriately for the transition.
- E12.19 The Contractor shall be responsible for restoration of any surfaces damaged during the Work under this section. There shall be no separate measurement or payment for restoration Work required as a result of this Work.

Measurement and payment

- E12.20 Measurement and payment measured on a linear metre basis for and paid for at the unit prices on item 6 Multi-Flo Drain and Item 7 Emitter for Multi-Flo Pipe on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- E12.21 All trenching, backfill, fittings, cleanouts, are to be considered incidental to the supply and installation of the pipe. Only the pipe installed according to the drawings will be measured.
- E12.22 Subsurface drainage required as part of the play safety surfacing system installation will not be measured separately under this section but will be considered incidental to the installation of the play safety surfacing.

E13. SODDING

General Description

- E13.1 This specification covers the removal of existing grass, topsoil or sand, levelling or excavating the area designated to receive sod, supply and installation of topsoil and sod, the topdressing and seeding of seam, edges and areas of Site restoration.

Materials and Methods

- E13.2 Topsoil and sod are to be supplied and installed as per CW 3510-R8 and CW 3540-R3.
- E13.3 Areas to be Sodded are to be laid out on Site and approved by Contract Administrator before commencing Work. Work outside the limits approved by the Contract Administrator will not be measured and will not be paid for under this section but considered incidental to the Work. Incidental Site restoration shall conform to the same Specifications.
- E13.4 Where edges of excavation abut existing turf those edges are to be cut with a sod cutter prior to excavation.
- E13.5 The compacted depth of topsoil shall be minimum 10 cm.

Measurement and Payment

- E13.6 Measurement and Payment will be at the contract unit price per square meter for Topsoil and Sod at the unit prices on item 12 Sod c.w. Topsoil on Form B: Prices Measurement shall be of the actual area sodded. Price shall be payment in full for supplying materials and for performing all operations listed below:

- (a) Supply and installation of topsoil.
- (b) Supply and placement of sod.
- (c) maintenance of sod.

E13.7 Payment shall be as per CW 3510

E14. TREES

- E14.1 This section shall cover the supply and installation of trees.
- E14.2 Trees shall be of the size and type specified. Trees which fail to meet this specification will be rejected.
- E14.3 The Contract Administrator reserves the right to inspect trees at their original source and the give direction as to root and branch pruning requirements.
- E14.4 Plant material shall be of quality and sizing consistent with all sections of "Canadian Guide for Nursery Stock" latest edition as published by the Canadian Nursery Trades Association. Plants are to be measured when in their natural position. Height and spread dimensions refer to the main body of the plant and not to the distance from branch tip to branch tip. Measurement of calliper is to be at a height of 15 cm above the base of the tree as measured in the nursery. All other measurements are to be as per Canadian Guide for Nursery Stock.
- E14.5 Trees shall be of number one grade having only sturdy stems that are reasonably straight for type, a well balanced crown and a single dominant leader. Trees shall be well branched, true to type, and structurally sound. Contract Administrator reserves the right to reject any trees that do not meet this criteria or show signs of disease, mechanical damage, insect or rodent damage, sunscald, frost cracks. All parts of the tree shall be moist and show live, green cambium beneath the surface of the bark.
- E14.6 Plants from native stands, woodlots, orchards or abandon nurseries shall be deem 'collected'. The use of collected plants will not be permitted.
- E14.7 Nomenclature for plants specified shall conform to the International Code of Nomenclature for Cultivated Plants and shall be in accordance with the approved scientific names given in the latest edition of Standardized Plant Names. Names not found within the Standardized Plant Names shall be understood to be in accordance with locally accepted practice. Where there is doubt or ambiguity the Bidder/Contractor shall notify the Contract Administrator and request clarification. The clarification of the Contract Administrator shall be considered final.
- E14.8 Topsoil Backfill mix shall be screened garden soil with a mixture of two parts black loam topsoil, one part sand and one part peat moss.
- E14.9 Tree stakes shall be heavy duty T rail iron stakes 37 mm x 37mm by 2.4 m primed with one coat of black zinc rich plant paint to CGSB 1GP-181B. Section of stake above ground shall be painted with one coat of black enamel paint.
- E14.10 Protection of stock
- (a) All nursery stock shall be well protected from damage from the time of digging until the time of planting on Site. Supplier and Installer are to ensure that the root ball is protected from drying out, and that all roots have been cleanly cut.
 - (b) Transport of nursery stock shall be done in a manner so that trees do not suffer damage during transport. Branches shall be tied to reduce the risk of mechanical damage. Equipment used to handle nursery stock shall be padded. Nursery stock shall be maintained in a moist condition from the time of arrival on Site until the time of planting.
- E14.11 All trees installed as a part of this Contract shall be guaranteed for a period of two years from the recognized completion date. Any plants found in poor condition or dead during this period shall be replaced with stock meeting the original specification and using methods/techniques

consistent with the original specification, without cost to the owner. During the growing season this replacement shall occur within two weeks of the Contractor being notified of the condition of the plants. In the event that an acceptable replacement tree is not available at the time a replacement is called for the Contractor shall remove the dead plant from the Site within the two-week period and restore the planting hole. The replacement tree shall be installed at the time it becomes available. Excepted is material or items damaged as a result of accidental causes or vandalism, which will not be subject to warranty.

E14.12 Contract Administrator reserves the right to extend the Contractor's warranty obligations for an additional one year period if, at the end of the initial warranty period leaf development and growth are not sufficient to ensure future survival.

E14.13 Plants shall be planted in locations determined on Site by the Contract Administrator.

E14.14 Replacement plant material installed under the terms of the warranty shall be maintained for a period of two years from the date that the replacement plant is installed. At the end of the maintenance period the Contractor is to remove any stakes, guy wires from the Site.

E14.15 Plants shall be measured and paid for at the unit prices Trees found in Item 17 on Form B:Prices. All stakes, guy wires, tree protection, mulch and topsoil are to be considered incidental to the installation of the tree and will not be measured or paid for separately.

E14.16 Plant List

Common Name/ <i>Botanical Name</i>	Size / Notes
Discovery Elm, <i>Ulmus davidiana</i> var. <i>Japonica</i> 'Discovery'	65 mm calliper, Min. 3m height. 80 cm. wire basket. Specimen quality. Well branched head above 1.8 m ht. Single straight trunk.

E15. TREE MAINTENANCE

E15.1 This section shall cover the maintenance for all trees supplied and during the course of this Contract.

E15.2 The Contractor shall be responsible for maintaining the plant material from installation for a period of two years from the date of installation or from the date of total performance which ever is later. It is expected that the plants shall be actively maintained from May 1 to October 31st of each year.

E15.3 The replacement of any deciduous or coniferous plant material shall initiate the start of an additional 2 year maintenance on the replaced plant.

E15.4 Active maintenance is to include;

- (a) Watering
- (b) Weeding control (tree well only)
- (c) Pest and Disease control
- (d) Pruning
- (e) Tree Support and tie maintenance and adjustment
- (f) Winter protection

E15.5 Water shall be applied as required to maintain optimum conditions. During dry weather the Contractor should expect to water on a weekly basis. Each tree is to be thoroughly watered when it is watered (40 liters per 25 mm of calliper). Contractor is to avoid over watering by reducing the frequency during wet weather.

- E15.6 Contractor shall maintain tree pits in a weed free condition throughout the maintenance period. Weed should be removed frequently and not left to establish for a period greater than 10 days.
- E15.7 Contractor is to control pests and diseases as required. Contractor shall inform the Contract Administrator prior to applying pesticides and use only those pesticides of low mammalian toxicity. Persons applying pesticides shall have a valid pesticide applicators license and strictly follow manufacturers instructions regarding the application of the chemicals and the safety precautions required to apply them.
- E15.8 Pruning shall be done by persons with a valid Manitoba Tree Pruners license. Pruning shall be as necessary to remove dead or damaged limbs as well as maintain species typical form and healthy growth. Pruning shall be done in accordance with industry accepted methods to standard good practice. In the event of a disagreement the opinion of the Contract Administrator as to what constituted standard good practice shall be considered final.
- E15.9 Tree support and stakes are to be inspected at each weeding/watering to ensure that they are properly adjusted.
- E15.10 At the end of each growing season Contractor is to ensure that tree is properly fitted with rodent protection as per the planting detail.
- E15.11 Maintenance operation are to be diarised. Each diary entry is to contain the following;
- (a) Maintenance Site Forman
 - (b) Date
 - (c) Weather conditions
 - (d) Actions performed
- E15.12 Maintenance of the installed trees shall be paid at the rate specified in item 18 on Form B:Prices Tree Maintenance and paid for at the end of the maintenance period.

E16. CRUSHER FINES PAVING

General Description

- E16.1 This specification covers the supply and installation of granular paving including all excavation, compaction, geotextile, sub-base and base construction as well as gravel surfacing, and repair of existing sod to ensure a smooth transition to the paving. Other items necessary to complete this portion of the Work and not noted elsewhere are considered incidental to this Work.

Materials and Methods

- E16.2 This specification is supplemental to CW 3110, CW 3130 and CW 3170. Materials and installation are to conform to these standard Specifications.
- E16.3 Sub-base, base materials and depths are as noted on drawing.
- E16.4 Excavation is to be reviewed by Contract Administrator prior to the installation of fabric or sub-base.
- E16.5 Sub-base is to be installed and compacted.
- E16.6 Where the granular paving is to pass through an existing grassed surface the Contractor is to cut the sod using a sod cutter at the edges of the new patio prior to excavation.
- E16.7 Except as specifically noted on the drawing areas of granular paving are to be constructed so as to function with existing drainage patterns and are to have a minimum cross slope of 2% and a maximum cross slope of 3%.

- E16.8 Granular paving is to meet existing landscaping, concrete paving and roads in a neat and precise manner.
- Measurement and Payment
- E16.9 Measurement and Payment will be at the contract unit price per square meter for 'Crusher Fines Paving' item 13 on Form B: Prices.
- E16.10 Where restoration of sod is required and is outside of an area specified for new sod, this shall be considered incidental to the crusher fines paving and will not be measured or otherwise paid for.
- E16.11 Measurement shall be of the actual area covered by granular paving within the limits shown on the Drawings. Price shall be payment in full for supplying materials and for performing all operations listed below:
- (a) Sod cutting adjacent edge of existing sod
 - (i) This item shall be considered to be 10 percent of the total cost.
 - (b) Stripping existing sod or topsoil.
 - (c) Excavate in-situ material to accommodate the pavement structure including base and sub base.
 - (d) Supply and installation of Geotextile.
 - (e) Supply and placement of Crushed limestone base course.
 - (f) Supply and placement of Crushed surfacing.
 - (g) Compaction
 - (h) Repair of grass (tie-in) at edge of newly constructed paving as may be required.

E17. SITE FURNITURE

General Description

- (i) This specification shall cover the supply and installation of benches, waste receptacles, signs and picnic tables as called for on the drawings. The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work as shown and specified herein.

Materials

- E17.2 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.
- E17.3 Picnic Table shall be Dumor Series 156-68-1PL Accessible Picnic Table. Finish is to be aluminium mill finish and planks are to be formed from recycled plastic with colour 'Cedar'.
- E17.4 Benches shall be Cascade Contour Benches, 72" long, galvanized frame, brown recycled plastic (#232), with inground mounting and two (2) galvanized armrests, or approved equal in accordance with B6.
- E17.5 Waste Receptacle shall be Metal Slat Type, as per SCD 119, Product #52501062, or substitute approved in accordance with B6 – Finish is to be galvanized.
- E17.6 Park Sign is to be a double-sided Bilingual Park Sign, as per SCD 718-B, with the name "Parc Frontenac Park.
- E17.7 Contact for Sign and Waste Receptacle
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
Email: ALennon@winnipeg.ca

E17.8 Contact for table

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

E17.9 Contact for benches

Playgrounds-R-Us
250 Transport Rd.
Box 7, Grp. 582, R.R. #5
Winnipeg, MB R2C-2Z2
Ph: (204) 632-7000
Fax (204) 632-7421

Construction Methods

E17.10 All fixtures and furnishings are to be installed as per manufactures instructions.

- (a) Install Benches as per Manufactures instructions.
- (b) Install Waste Receptacle as per SCD-119.
- (c) Install picnic table as per manufacturers instruction and anchor bolting to precast concrete base and anchoring using 'duckbill' type anchor c.w. stainless steel cable.
- (d) Install park signs as per SCD-171AR

E17.11 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.

E17.12 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.

Method of Measurement and Basis of Payment

E17.13 Measurement and payment shall be for each as per Form B: Prices. Said price shall include all Work necessary to supply and install each item of Site furniture.

E18. SITE RESTORATION

E18.1 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, and as a condition of

Total Performance 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.

PLAYGROUND

E19. PROTECTIVE SURFACING

Description

E19.1 This specification shall cover the supply and installation of protective surfacing within the play equipment area.

Materials

E19.2 Wood Fibre product shall be either Zeager Woodcarpet System using drainage gravel or Fibar FibarSystem 200 or 300 products or substitute in accordance with B6. It shall include wood fibre, filter cloth, subsurface drainage system and mats for bottom of swings and slides as well as other locations required by the manufacturer.

(a) Contacts:

(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

(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

Construction Methods

E19.3 Area of Protective surfacing shall be as indicated on the drawings.

E19.4 Protective surfacing shall not be installed until after the play area subgrade has been completed and the subgrade has been accepted by the Contract Administrator.

E19.5 Protective Surfacing shall be installed within the play area, as defined by the edging that will be installed by others, to the following minimum depths as determined by the maximum fall height of the play equipment and the fall height criteria as outlined in CSA Z614-07 or the following minimum depths, whichever determination is greater:

Wood Fiber	300 mm;
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E19.6 The installation of the surfacing shall be done immediately after the play equipment has been installed.

- E19.7 For manufactured products 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.
- E19.8 Installation shall be done by equipment sized to suit the Work being done and the surfacing 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 surfacing.

Method of Measurement and Basis of Payment

- E19.9 Protective Surfacing will be measured on a square metre basis for and paid for at the unit prices on item 5 Supply and install wood fiber accessible playground surfacing on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator
- E19.10 There shall be no additional measurement or payment for items such as including fibre, filter cloth, subsurface drainage and mats necessary to install the playground surfacing in a manner consistent with the manufactures instructions as noted in item E19.7. Such items shall be considered incidental to the installation of the protective surfacing.

E20. TIMBER/PEDRA PLAY CURB/RETAINING WALL & SANDBOX

General Description

- E20.1 The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the drawings and specifications.
- E20.2 This specification shall cover the supply and installation of timber edging to contain the safety surfacing for the New Play Area.
- E20.3 This specification shall also apply to the construction of a sandbox and the installation of play sand in the sand box.

Materials

- E20.4 All granular base material shall conform to CW 3110-R10 and CW3130-R1. 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.
- E20.5 All bottom timbers to be ACQ pressure treated (P.T.) pine, No.2 or better, no wane, bark, checking or splitting permitted. Wood shall be smooth and free of rough areas. All bottom Timber to be 150mm x 150mm to be longest lengths possible with a minimum length of 1200mm.
- E20.6 Screws shall be stainless steel or ceramic coated and certified for use with ACQ pressure treated wood.
- E20.7 All capping wood to be 32mm x 150mm Pedra or approved equal in accordance with B6.
- E20.8 Play sand shall be natural 'washed' playground sand of rounded particles, free of fines, clay, stones, silt or other debris,
- (a) and shall meet the following criteria:
- (i) 100% passing 6.7 mm sieve
 - (ii) 99.5% passing 4.75 mm sieve;
 - (iii) 97-100% passing 2.36 mm sieve;
 - (iv) 70-90% passing 1.18 mm sieve;
 - (v) 25-60% passing 600 um sieve;

- (vi) 5-25% passing 300 um sieve;
 - (vii) 0-3% passing 150 um sieve
 - (viii) 0-1 % passing 75 um sieve.
- (b) Samples of specified material shall be submitted for approval to the Contract Administrator at least seven (7) Calendar Days prior to ordering of the material.

Construction Methods

- E20.9 Layout shall be established on site as per the drawings provided. Contractor is to ensure that layout is established in such a way as to ensure that minimum safety zones for the proposed play equipment in accordance with on the most recent CSA safety zone requirements, can be established wholly within the curbing as laid out on site.
- E20.10 Timbers shall not be installed until after all rough grading is complete and both the rough grading and the layout and has been reviewed and approved as consistent with the general intend of the design drawings by the Contract Administrator.
- E20.11 Granular base shall be installed as per detail provided and compacted to a minimum of 95 percent Standard Proctor Density.
- E20.12 Timbers shall be installed as per Details provided. Base course timbers shall be pinned with a minimum of two (2) 19mm diameter by 500mm rebar at maximum 1200mm O.C.
- E20.13 All timbers shall be cut neatly for a proper fit with no spaces or gaps between. All cuts shall be treated with end cut as per manufacturers recommendation before being secured. Finished elevations shall ensure that all timbers are smooth, level, set plumb and spaced uniformly. Cuts treated with end cut preservative after being joined will not be accepted.
- E20.14 Pedra cap joints to be offset from bottom timber joints by a minimum of 450mm. Pedra caps shall be pre-drilled, set with grain of wood curved down, and fastened to base course with screws treated for ACQ use and sized to suit. Pedra capping above base course shall be secured with double row of screws offset at 225mm and installed at 600mm O.C. Minimum length of Trex pieces shall be 1200mm.
- E20.15 Pedra cap shall be applied to existing play curb and attached provided details.
- E20.16 Turf shall be repaired as required around edging in accordance with the CW 3510

Measurement and Payment

- E20.17 Method of Measurement shall be as follows:
- E20.17.1 Play Curb/Retaining Wall will be measured on a linear metre basis. The linear metre to be paid for the total number of linear metre of pedra cap that is installed in accordance with this Specification and the Construction Drawings, and as acceptable to the Contract Administrator. This measure will be deemed to include the pedra cap, all lower layers, excavation, base, compaction, and joiners.
- E20.17.2 Sand Box shall be per each. The wooden portion of the sandbox will not be measured as part of the play curb.
- E20.18 Basis of Payment shall be as follows:
- E20.18.1 Play Curb will be paid for at the Contract Unit Prices as indicated in item 4 on Form B:Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- E20.18.2 Payment for the Sand box shall be lump sum as per the price noted on Form B:Prices. Said payment shall be deemed to include supply and install of the timber, cap, play sand, geotextile, and excavation.

E21. PLAY EQUIPMENT

- E21.1 This specification shall cover the supply and installation of the Play Equipment as listed below and specified herein.
- E21.2 The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the drawings and specifications.
- E21.3 The Contractor shall obtain all approvals including the requisite Development Permit.
- E21.4 Play Equipment shall include an accessible playstructure for children ages 2-5 as well as an 8' ht two bay swing, and independent components.
- E21.4.1 Play Equipment must provide the following play activities
- (a) Balancing;
 - (b) Sliding;
 - (i) min. 2 sliding events at two heights;
 - (ii) including 1 metal slide;
 - (c) Climbing (Minimum three events) including an independent climber such as a climbing rock;
 - (d) Creative/Imaginative play; and
 - (e) Motion (springing, spinning, etc);
- E21.4.2 The design submission shall be evaluated as per B15.5.
- E21.5 If colour is a feature of posts, top caps and panels, the Contract Administrator shall have the ability to modify specified colours from the proposed design after Contract Award. If the price of the equipment in the Bid Submission is subject to the colours of the proposed design, this must be indicated in the Bid Submission.
- E21.6 Components which are unacceptable are the following:
- (a) Wooden structures;
 - (b) Tube (enclosed) slides and enclosed 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) Roof components;
 - (j) Binoculars / telescopes;
 - (k) Barrel rollers; and
 - (l) Large number of plastic components.

E22. PLAYSTRUCTURES

General Description

- E22.1 This specification shall cover the supply and installation of one or more Playstructures as specified herein.

E22.2 Play equipment shall be installed in the play area as shown on the Drawings. The play equipment and their safety zones must fit into the proposed play areas as shown on Drawings.

Materials

E22.3 Posts / Caps

- (a) All posts shall be a minimum 5" O.D. round or 4" square tubing.
- (b) 3.5 " O.D. round or 3.0" square tubing will be permitted in circumstances where a multi-deck structure has decks of varied heights which are all under 4', or for structures with 2 decks or less.
- (c) All posts shall be fabricated from either aluminum (0.125" min. wall thickness) or galvanized steel (0.120" min. wall thickness) tubing. All fabrication cuts, drill holes and weld joints shall be sprayed with a corrosion resistant coating. The bottom end of the posts is to be sealed with a moisture barrier.
- (d) Top caps shall be made of steel construction and shall be factory installed and secured in place with tamper proof, self-sealing rivets. Plastic top caps will be accepted if made of solid construction (hollow caps not accepted).
- (e) If painted colour is a feature of posts and top caps, it shall be a baked-on polyester powder coating. The powder coating finish shall meet or exceed ASTM standards for hardness, adhesion, impact and salt spray resistance.

E22.4 Decks (if applicable)

- (a) All decks shall be manufactured from vinyl-coated perforated steel or a steel core composite. Deck heights may vary to a maximum height of 6'.

E22.5 Clamping System

- (a) All deck, rail and play component clamping systems shall be fabricated from zinc plated, galvanized steel, stainless steel or aluminum. Tamper proof, corrosion resistant fasteners shall be used to retain clamping systems.

E22.6 Handrails, Safety Rails and Handloops (if applicable)

- (a) All handrails, safety rails and handloops shall be fabricated using a minimum of 15/16" (24mm) O.D. with a .120" wall thickness steel tubing. After all fabrication activities have occurred including end cuts, drill holes, bends and weld joints, all components shall be hot dipped galvanized.
- (b) Smooth all cut edges and weld joints prior to hot dip galvanizing and ensure that all tubing is free from burrs, cracks, defects and other imperfections.

E22.7 Hardware

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

E22.8 Poly Components

- (a) Poly components such as slides and hoods shall be fabricated from U.V. stabilized, rotationally molded linear low-density polyethylene.
- (b) Poly components such as play panels shall be fabricated from compression molded solid colour, U.V. stabilized, high-density polyethylene.

E22.9 Slides (if applicable)

- (a) Stainless steel is preferred for slide beds, although a plastic slide may be used if there is a stainless steel slide also on the Site. North or east orientation preferred.

E22.10 Each playstructure shall have kick plates and hand loops as required to meet the most recent Canadian Standards Association Standards.

Installation

E22.11 Playstructures shall not be installed until after the play area subgrade has been completed and the subgrade has been accepted by the Contract Administrator.

E22.12 Play equipment shall be installed as per manufacturer's specifications and in accordance with the most recent Canadian Standards Association Standards.

E22.13 All posts and other vertical items shall be plumb and true to vertical, if so designed.

E22.14 All decks shall be level, if so designed.

E22.15 Playstructure shall be secured and rendered unusable until safety surfacing is in place.

Method of Measurement and Basis of Payment

E22.16 Method of Measurement shall be as follows:

(a) Playstructures will comprise only part of the overall Play Equipment, measured on a lump sum basis:

(i) Item 9 Junior Play Structure on Form B: Prices. This shall include the play structure as well as all play components attached to, or functionally linked to, the structure, but not including Independent Components located within the Play Area.

E22.17 Basis of Payment shall be as follows:

(a) Playstructures will be paid for at the Contract Unit Prices. The amount to be paid for shall be the lump sum as indicated in Item 9 Junior Play Structure on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E23. INDEPENDENT COMPONENTS

General Description

E23.1 The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the specifications.

E23.2 This specification shall cover the supply and installation of Independent Components as specified herein.

E23.3 Independent Components shall be installed as per the proposed design, as the proposed budget will allow.

E23.4 Independent Components shall be installed in the available areas as shown on the Drawings. The Components and their safety zones must fit into the proposed play area.

Materials

E23.5 All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all parts and materials.

E23.6 There shall be a minimum (or no) amount of hollow plastic components. Solid plastic is acceptable.

E23.7 Selection of play equipment shall minimize the amount of solid elements which limit visibility through the Site.

E23.8 Fasteners

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.

E23.9 Finishes

- (a) 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.

E23.10 Slides

- (a) If an independent slide is proposed, stainless steel is preferred. If other slides are proposed on the Site one may be plastic. North or east orientation preferred. If independent slide over 4' high is proposed, support posts must be minimum 5" O.D.
- (b) Tube (enclosed) slides and plastic spiral slides will not be accepted.

Installation

E23.11 Independent components shall not be installed until after the play area subgrade has been completed and the subgrade has been accepted by the Contract Administrator.

E23.12 Independent components shall be installed according to Manufacturers recommendations and in accordance with the most recent Canadian Standards Association Standards.

E23.13 Independent Components shall be secured and rendered unusable until safety surfacing is in place.

Method of Measurement and Basis of Payment

E23.14 Method of Measurement shall be as follows:

- (a) Independent Components located within the Play Area, not including those attached to or functionally linked to the play structure, will be incorporated into the lump sum cost for Item 10 Independent Play Components on Form B: Prices.

E23.15 Basis of Payment shall be as follows:

- (a) Independent Components, if proposed, that are located within the Play Area shall be paid for at the Contract Unit Price. The amount to be paid for shall be the total number of units, as indicated for 10 Independent Play Components on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E24. SWINGS

General Description

This section shall cover the supply and installation of new swings.

Materials

E24.1 New Swings shall be 8' high, two bay, 4 place w 90 mm (3.5") O.D. 7 gauge OR 2 3/8" O.D. 5 gauge, RS40 galvanized steel pipe top beam and 60mm (2 3/8") 10 gauge legs all RS 40- glavanized with powdercoated end fittings.

E24.2 Seats shall include two slash proof rubber enclosed infant seats, and two belt slash proof belt seats.

- (a) Enclosed infant seats shall be moulded of U.V. stabilized, high quality rubber with a tempered stainless steel reinforcement plate insert moulded inside, rendering the seats

slashproof. Infant seats shall be fully enclosed to prevent slipping out and provide extra lower back support.

(b) Belt seats shall be slash proof c.w. shackle.

E24.3 Chains shall be heavy duty 4/0 straight link galvanized steel chain, c.w. double clevis and bolt links or approved substitute in accordance with B6.

E24.4 Yoke clamps shall be either one piece construction and fabricated from 8 guage RS40 Galvanized steel or two piece, compression clamping cast aluminum or galvanized metal with baked on polyester powdercoating. They shall be complete with tamper proof hardware.

E24.5 Swing Hangers shall be fabricated from galvanized malleable iron and have oil impregnated bearings pressed in. Swing hangers shall by anti-wrap.

E24.6 All fabrication cuts, drill holes, and weld joints shall be sprayed with a corrosion resistant coating and the bottom end of the posts shall be sealed with a moisture barrier.

Installation

E24.7 Swings shall not be installed until after the play area subgrade has been completed and the subgrade has been accepted by the Contract Administrator.

E24.8 Swings shall be installed according to manufactures recommendations and in a manner consistent and in accordance with the Canadian Standards Association Guidelines.

E24.9 Swings shall be secured and rendered unusable until safety surfacing is in place.

Measurement and Payment

E24.10 Measurement and payment shall be lump sum as per Form B: Prices. This lump sum shall include all items of Work necessary and incidental to supplying and installing complete and operating swings in accordance with Canadian Standards Association guidelines.

E25. FOUNDATIONS

General Description

E25.1 All playground equipment posts, bases and anchors are to be set in concrete footings or piles to ensure stability and prevent frost heaving. The current Standard Construction Specifications of the City of Winnipeg, CW 2160 - latest revision - Concrete to be used in Underground Works, is to be utilized in the installation of the concrete works for all below ground components.

E25.2 An alternative to concrete footings or piles that may be approved includes a welded and secured rail mounting system.

Materials

E25.3 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.

Installation

E25.4 All posts and supports shall be centred in the concrete footing such that there is a complete collar of concrete around each post and support. Where posts are not perfectly centred there should be a minimum of 2" concrete at any point around the post.

E25.5 All concrete footings for play equipment shall be a minimum of 3' depth, or in accordance with Manufacturer's specifications, whichever is greater.

Method of Measurement and Basis of Payment

E25.6 Method of Measurement shall be as follows:

(a) Foundations shall be incidental to the measurement of Playstructures and Independent Components listed above and as shown on Form B: Prices.

E25.7 Basis of Payment shall be as follows:

(a) No separate payment shall be made for play equipment foundations.

E26. MAINTENANCE KITS

E26.1 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.

E26.2 There shall be no payment for the maintenance kits.