



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 670-2006

ASSINIBOINE PARK-PLAYGROUND DEVELOPMENT AT THE ZOO

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PART B - BIDDING PROCEDURES

B1. PROJECT TITLE

B1.1 ASSINIBOINE PARK-PLAYGROUND DEVELOPMENT AT THE ZOO

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, November 28, 2006.

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

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

B3. SITE INVESTIGATION

B3.1 Further to GC:3.1, the Bidder may attend a Site meeting from 12:00 p.m. to 1:00 p.m. on November 9, 2006. Attendance is not mandatory.

B3.2 The Bidder is advised that the Site is to be viewed prior to submitting a Bid to familiarize the Bidder with the nature of the Work area, and Site access restrictions. Bidders shall note that existing trees are to be protected and proximity of trees to the construction area may limit the type of construction equipment utilized. The Bidder is made aware the Zoo will require financial compensation for trees or plant material damaged by the Contractor.

B3.3 The Bidder shall not be entitled to rely on any information or interpretation received at the Site Meeting unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

B4. ENQUIRIES

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

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

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

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

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

B5. ADDENDA

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

- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet site for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least four (4) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with E14.1(d) and the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.

- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative shall base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B7. BID SUBMISSION

- B7.1 The Bid Submission consists of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices.
- B7.2 The Bid Submission shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.2.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.
- B7.3 Bid Submissions submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.4 Bid Submissions shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Branch
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B8. BID

- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

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

B9. PRICES

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 Notwithstanding GC.12.2.3(c), prices on Form B: Prices shall include the Manitoba Retail Sales Tax (MRST, also known as PST).
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B10. QUALIFICATION

- B10.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba;
 - (b) be responsible and not be suspended, debarred or in default of any obligation to the City;
 - (c) be financially capable of carrying out the terms of the Contract;
 - (d) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract;
 - (e) have successfully carried out work, similar in nature, scope and value to the Work;
 - (f) employ only Subcontractors who:
 - (i) are responsible and not suspended, debarred or in default of any obligation to the City (a list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>); and
 - (ii) have successfully carried out work similar in nature, scope and value to the portion of the Work proposed to be subcontracted to them, and are fully capable of

performing the Work required to be done in accordance with the terms of the Contract;

- (g) have a written workplace safety and health program in accordance with The Workplace Safety and Health Act (Manitoba);

B10.2 The Bidder shall be prepared to submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B10.3 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B11. OPENING OF BIDS AND RELEASE OF INFORMATION

B11.1 Bid Submissions will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Branch, or in such other office as may be designated by the Manager of Materials.

B11.1.1 Bidders or their representatives may attend.

B11.2 After the public opening, the names of the Bidders and their Total Bid Prices as read out (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B11.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B11.4 The Bidder is advised that any information contained in any Bid Submission may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B12. IRREVOCABLE BID

B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

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

B13. WITHDRAWAL OF BIDS

B13.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B13.1.1 Notwithstanding GC:23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.

B13.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

- B13.1.3** If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials shall:
- (a) retain the Bid Submission until after the Submission Deadline has elapsed;
 - (b) open the Bid Submission to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.
- B13.2** A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

B14. EVALUATION OF BIDS

- B14.1** Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6.
- B14.2** Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid Submission 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 if the interests of the City so require.
- B14.3** Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid Submission or in other information required to be submitted, that he is responsible and qualified.
- B14.4** Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices and will be adjusted, if necessary, as follows:
- (a) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price; or
 - (b) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budgetary provision for the Work, then the deductions will be made to the Total Bid Price in the following order:
 - (i) Item 13- Drinking Water Fountain;
 - (ii) Item 9-Shrubs **and** Item 10-Trees **and** Item 11-Tree and shrub maintenance for two years.

B15. AWARD OF CONTRACT

- B15.1** The City will give notice of the award of the Contract or will give notice that no award will be made.
- B15.2** The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.

- B15.2.1 Without limiting the generality of B15.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Bid is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B15.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid.
- B15.4 Notwithstanding GC:4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B15.5 The Contract, as defined in GC:1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

PART C - GENERAL CONDITIONS

C1. GENERAL CONDITIONS

C1.1 The *General Conditions for Construction Contracts* (Revision 2000 11 09) are applicable to the Work of the Contract.

C1.1.1 The *General Conditions for Construction Contracts* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

- D1.1 In addition to the *General Conditions for Construction Contracts*, these Supplemental Conditions are applicable to the Work of the Contract.
- D1.2 The General Conditions are amended by striking out "The City of Winnipeg Act" wherever it appears in the General Conditions and substituting "The City of Winnipeg Charter".
- D1.3 The General Conditions are amended by striking out "Tender Package" wherever it appears in the General Conditions and substituting "Bid Opportunity".
- D1.4 The General Conditions are amended by striking out "Tender Submission" wherever it appears in the General Conditions and substituting "Bid Submission".
- D1.5 The General Conditions are amended by deleting GC:6.16 and GC:6.17. The City of Winnipeg is now within the jurisdiction of the Manitoba Ombudsman pursuant to The Ombudsman Act.

D2. SCOPE OF WORK

- D2.1 The Work to be done under the Contract shall consist of Playground Development at the Zoo.
- D2.2 The major components of the Work are as follows:
- (a) Layout of the proposed play area concentric to the existing circular Animal Tracks Cafe
 - (b) Excavation for the proposed play area and sod area including required saw-cutting of existing asphalt and removal of existing concrete and riprap stone edging.
 - (c) Supply and install timber edging
 - (d) Supply and install Engineered Wood Fibre.
 - (e) Supply and install play equipment.
 - (f) Supply and install trees and shrubs.
 - (g) Sodding.

D3. CONTRACT ADMINISTRATOR

- D3.1 The Contract Administrator is:
- Stefan Fediuk
Landscape Architect
Planning, Property and Development Department
15-30 Fort Street Winnipeg, MB R3C 4X5
- Telephone No. (204) 986 5597
Facsimile No. (204) 986 7524
- D3.2 At the pre-construction meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

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 GC:23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

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

D5.3 All notices of appeal to the Chief Administrative Officer shall be sent to the following address or facsimile number:

The City of Winnipeg
Chief Administrative Officer Secretariat
Administration Building, 3rd Floor
510 Main Street
Winnipeg MB R3B 1B9
Facsimile No.: (204) 949-1174

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

The City of Winnipeg
Corporate Services Department
Legal Services Division
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1
Facsimile No.: (204) 947-9155

SUBMISSIONS

D6. INSURANCE

D6.1 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) all inclusive, with The City of Winnipeg being added as an additional insured, with a cross-liability clause, such liability policy to also contain a contractual liability, an unlicensed motor vehicle liability and a products and completed operations endorsement to remain in place at all times during the performance of the Work and throughout the warranty period;
- (b) automobile liability insurance for owned and non-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.

D6.2 Deductibles shall be borne by the Contractor.

- D6.3 The Contractor shall provide the Contract Administrator with a certificate of insurance of each policy, in a form satisfactory to the City Solicitor, 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.
- D6.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

D7. PERFORMANCE SECURITY

- D7.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), the Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
 - (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
 - (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.
- D7.1.1 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.
- D7.2 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.

D8. SUBCONTRACTOR LIST

- D8.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

SCHEDULE OF WORK

D9. COMMENCEMENT

- D9.1 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.
- D9.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence that the Contractor is 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;
 - (ii) evidence of the workers compensation coverage specified in GC:6.14;

- (iii) evidence of the insurance specified in D6;
 - (iv) the performance security specified in D7; and
 - (v) the Subcontractor list specified in D8.
- (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.
- (c) **the Contractor shall schedule the ordering of equipment (such as play equipment) to ensure the price for this year (2006). The playground equipment can be stored at the Zoo in a location to be provided by the Zoo Coordinator or designate.**

D9.3 The Contractor shall not commence the Work on the Site before May 1, 2007.

D10. SUBSTANTIAL PERFORMANCE

D10.1 The Contractor shall achieve Substantial Performance within Twenty (20) consecutive Working Days of the commencement of the Work as specified in D9.

D10.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D10.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D11. TOTAL PERFORMANCE

D11.1 The Contractor shall achieve Total Performance within twenty five (25) consecutive Working Days of the commencement of the Work as specified in D9.

D11.2 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.

D11.3 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.

D12. LIQUIDATED DAMAGES

D12.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the five hundred dollars (\$500) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.

D12.2 The amount specified for liquidated damages in D12.1 is based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.

D12.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

CONTROL OF WORK

D13. JOB MEETINGS

- D13.1 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.
- D13.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D14. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D14.1 Further to GC:6.26, 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).

D15. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES

- D15.1 Further to GC: 6.12, 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.
- D15.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.
- D15.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.
- D15.4 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Act.
- D15.5 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Fall Protection guidelines.
- D15.6 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.

D16. DAMAGE TO EXISTING STRUCTURES, PROPERTY, SERVICES AND UTILITIES

- D16.1 Further to GC: 17, 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 thereto in the performance of the Work, the Contractor shall upon instructions from and to the satisfaction of the Contract Administrator and the Zoo Coordinator thereof, either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to, the Contract Administrator. The cost of which shall be borne entirely by the Contractor. The Contractor shall also indemnify and save harmless the City from all claims made directly or indirectly against it in respect to any such damage.

D16.2 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 property. The Contractor shall take such measures as are necessary to ensure safe and convenient pedestrian ingress and egress. Any damage caused by the negligence of the Contractor or his Sub-contractors to the adjacent Works or properties, shall be promptly repaired by him at his own expense, to the satisfaction of the Contract Administrator.

D16.3 Existing Services and Utilities

No responsibility will be assumed by the City for correctness or completeness of the Drawings, when provided, with respect to the existing utilities, pipes or other objects either underground or on the surface; the City shall not be liable for the incorrectness and inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of all such utilities, pipes and other objects and to make good any damage done to them.

D17. PROTECTION OF EXISTING TREES

D17.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing trees within the limits of the construction area:

- (a) Trees greater than 100 mm diameter or trees identified to be at risk by the Contract Administrator are to be strapped with 25x100x2440 mm wood planks, or other suitable protection as approved by the Contract Administrator. Do not use nails or other fasteners that penetrate the tree trunk. The width and length of strapping may be reduced to suit the tree being protected as approved by the Contract Administrator.
- (b) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches) where 1 inch diameter equals 1 foot measured from the outside edge of the trunk of the tree at 6 inches above grade. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of the excavation.
- (c) Equipment shall not be operated within the drip line without written permission from the Contract Administrator. 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 entire ground surface located directly beneath the tree and radiating out to 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.
- (d) Repair, replace and maintain tree protection materials during construction until the Project completion.
- (e) Carefully remove safety fencing and strapping material without harming the trees as soon as the construction and restoration Work is complete.

D17.2 Obtain approval from the Contract Administrator to excavate within 2.0 M of a tree.

D17.3 Excavate in a manner to minimize damage to the tree root systems. Keep exposed roots in excavations and trenches moist or shaded. If stockpiling of excavated soil material is required, stockpile in areas away from the tree roots if possible.

D17.4 Prune exposed roots with equipment such as trencher, chain saws, root cutters or other methods acceptable to the Contract Administrator in a manner that will leave a neat, clean root end.

D17.5 Take precautions to ensure tree limbs overhanging the Work area are not damaged by construction equipment. Contact the Forestry Branch for consultation or pruning of overhanging or damaged limbs and branches and other unanticipated problems with trees during the construction of the Works.

- D17.6 The City of Winnipeg Naturalist Branch, also has authority for Natural stands of forested/brush/native grass areas, and may also instruct the Contractor on protective measures to protect the riverbank vegetation.
- D17.7 Further to the Naturalist requirements the Contractor must set up a temporary orange safety fence to define the agreed upon Work area to ensure that additional damage does not occur to adjacent vegetation. Damage to vegetation and established trees beyond the defined Work will result in additional charges based on the Forestry Branch assessment of the tree valuation.
- D17.8 All damage or pruning required to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the Forestry Branch. Damages must be repaired by an Individual with a Manitoba Arborist Licence or by the Forestry Branch.
- D17.9 Protection of existing trees, repair of trees and pruning of damaged limbs will not be measured for payment and is to be included with the Underground or Surface Works. Removal and replacement of existing trees by the Forestry Branch deemed to have died or that are dying due to damage from carelessness during construction, will be at the Contractor's cost. The Contractor will be invoiced for the cost, or have the cost deducted from any payments owing

D18. TEMPORARY UTILITIES

- D18.1 Further to GC: 6.12, the Contractor shall make his own arrangements in connection with the temporary use of lighting, power, gas, sewer, water or other utilities, and pay all costs in connection therewith.
- D18.1.1 All necessary permits, fees and other like expenses as well as the cost of temporary connections to existing facilities shall be arranged and paid for by the Contractor.

FORM H1: PERFORMANCE BOND
(See D7)

KNOW ALL MEN BY THESE PRESENTS THAT

_____ ,
(hereinafter called the "Principal"), and

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

_____ dollars (\$_____)

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

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

_____ day of _____, 20____, for:

BID OPPORTUNITY NO. 670-2006

ASSINIBOINE PARK-PLAYGROUND DEVELOPMENT AT THE ZOO

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

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

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

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

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

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

_____ day of _____, 20____ .

SIGNED AND SEALED
in the presence of:

(Witness)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)**
(See D7)

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 670-2006
ASSINIBOINE PARK-PLAYGROUND DEVELOPMENT AT THE ZOO

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, STANDARD DETAILS AND DRAWINGS

- E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.1.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- E1.1.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.1.3 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.2 The following Drawings are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
A3-HX1	ASSINIBOINE PARK-Playground development at the Zoo- Existing Conditions
A3-HX2	ASSINIBOINE PARK-Playground Development at the Zoo- Proposed Development
A3-HX3	ASSINIBOINE PARK-Playground Development at the Zoo- Layout Plan
A3-HX4	ASSINIBOINE PARK-Playground Development at the Zoo- Grading Layout
SK-1	DECIDUOUS BALL AND BURLAPPED PLANTING
SK-2	Existing Manhole- Details
SK-3	PLAYGROUND TIMBER EDGE DETAIL

E2. TRUCK WEIGHT LIMITS

- E2.1 The City shall not pay for any portion of Material which results in the vehicle exceeding the maximum gross vehicle weight allowed under *The City of Winnipeg Traffic By-Law*, unless such vehicle is operating under special permit.

E3. SITE ACCESS

- E3.1 Access to the Site will be determined at the pre-construction meeting. This access area shall be provided and maintained by the Contractor at his own expense and approved by the Contract Administrator and the Zoo Coordinator.
- E3.2 The Contractor shall take such measures as are necessary to ensure safe and convenient pedestrian ingress and egress.
- E3.3 The Contractor shall be restricted to the Site access location and route only so that there is a minimum of disturbance to the existing ground surface. Damage to areas beyond the marked route shall be repaired by and at the expense of the Contractor to the satisfaction of the Contract Administrator.

E4. SITE CONDITIONS

- E4.1 The Contractor will examine the Site and make themselves familiar with the existing conditions (both above and below grade) and nature of Work to be done.
- E4.2 Surface and sub-surface conditions shown on the drawings and included herein are provided for general information and variations there from will not affect the terms of the Contract.

- E4.3 The Contractor is responsible to determine the location of all underground utilities and obtain clearances prior to construction. Underground structures as shown on the drawings are based on the best information available but no guarantee is given that all existing utilities are shown or that given locations are exact.

E5. LAYOUT OF WORK

- E5.1 The layout of the proposed play area development shall be concentric to the existing circular Animal Tracks Café.
- E5.2 The Contractor will set control lines and bench marks by means of stakes, buoys or marks and the Contractor shall make the completed works conform to the lines and marks thus indicated. The Contractor shall furnish all other lines and levels required. The Contractor shall be responsible for the careful preservation of all stakes and marks so set whether relating to his own or to other work. Care must be taken that the Contract Administrator be notified immediately of the disturbance of any such stakes or marks; the cost of correcting any errors arising out of neglect of the Contractor or his agent or his employees, to so notify the Contract Administrator shall be borne entirely by the Contractor, as well as the cost of replacing any disturbed stakes or marks.
- E5.3 All layout Work shall be inspected and approved by the Contract Administrator prior to construction.
- E5.4 Before commencing Work the Contractor shall satisfy himself as to the meaning and correctness of all stakes and marks and no claims shall be entertained by the City of Winnipeg on account of any alleged inaccuracies. If any error is suspected in the plans, specifications or the directions of the Contract Administrator, Work shall be discontinued until the errors are rectified, no claims shall be made on account of any delay occasioned thereby.

E6. EXCAVATION

- E6.1 Description
- E6.1.1 This specification covers the excavation for the new play area and sod area as indicated on the Drawings and as directed by the Contract Administrator including removal of existing concrete edging and rip-rap stone edge.
- E6.2 Construction Methods
- E6.2.1 The proposed play area is to be excavated to the depths required to accept a minimum 300mm depth of engineered wood fibre, in accordance with Edging Detail on Drawing SK-3.
- E6.2.2 The proposed sod area is to be excavated to the depth of 100mm.
- E6.2.3 The existing concrete edging and riprap stone edge to be removed and legally disposed.
- E6.2.4 The saw cutting of existing asphalt to remove edging is considered as incidental to the excavation.
- E6.2.5 All extraneous materials are to be removed from the Site and disposed of in a safe and legal manner. This specification shall amend and supplement City of Winnipeg Standard Construction Specifications CW 3110-R7. The Work to be done by the Contractor under this specification shall include all labour, equipment and material necessary for and incidental to the satisfactory performance and completion of the Work herein specified.
- E6.2.6 Disposal of material shall be understood to mean the hauling of all unsuitable material from the Site and the unloading in a legal manner acceptable to the Contract Administrator.

E6.2.7 Work includes the stockpiling of suitable Site material, and the satisfactory disposal of unsuitable Site material such as clays susceptible to frost-heaving, silts, rocks, rubble rubbish and any surplus suitable Site material. Do not disturb adjacent items designated to remain in place.

E6.3 Method of Measurement and Basis of Payment

- (a) Excavation will be paid for at the contract unit price measured by the cubic metre for
 - (i) Excavation for play area.
 - (ii) Excavation for new sod area.
- (b) The amount to be paid for shall be the total number of units, measured as specified herein. No payment will be made for material removed outside the limits of excavation. Contractor shall submit a copy of the weigh bill for excavated material to the Contract Administrator. 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.

E7. ENGINEERED WOOD FIBRE

E7.1 Description

- (a) This specification shall cover supply and installation of Engineered Wood Fibre from 'Fibar' or approved alternative from other company including required felt fabric and drain matrix.
- (b) The Contractor is to make sure that the existing surface slopes are maintained to ensure proper drainage using existing manhole on the site. Refer to Drawing SK-2

E7.2 Materials

- (a) Engineered Wood Fibre is a mix of random-sized virgin wood fibres. Recycled materials such as ground pallets are not acceptable. Engineered wood fibres shall have no twigs, bark, leaf debris or other organic material incorporated within. The species of woods that are used are comprised of, but are not limited to; White Oak, Red Oak, Maple, Ash, Douglas Fir, Lodge Pole Pine, Cedar, Yellow Pine and Poplar.
- (b) The particles generally are ten (10) times longer than they are wide and frequently have whiskery strands on all faces of the fibre. Hardly any two fibres are identical in all dimensions and appearance.
- (c) The Contractor shall provide certification that no chemical treatments or additives are present and that the material is non-toxic.
- (d) Product must be IPEMA Certified for Engineered Wood Fibre. The Contractor shall provide certification from an independent laboratory validating that the manufacturer's wood fibre material is IPEMA certified. Product must meet the ASTM F 2075 Standard for Engineered Wood Fibre.
- (e) The Contractor shall provide certification that test results from an independent laboratory certifying that the wood fibre material meets the ASTM F 1951 Standard Specification for Accessibility.
- (f) Product must carry Product Liability Insurance.
- (g) The Contractor shall provide certification that the product exceeds CPSC guidelines for Impact attenuation when tested according to ASTM F 1292. Test results must be provided for new and 12-year-old material. Testing of Engineered Wood Fibre in accordance with ASTM F 1292 must show G-max values of less than 155G for the 8" thick system, or 120G for the 12" system at 12' drop heights, and HIC values of less than 1,000 for both new and 12-year-old material.

- (h) The Contractor shall provide written manufacturer's 25-year (300 System), 20-year (200 System), or 15-year (100 System) warranty against loss of resiliency; lifetime warranty on fabric and drainage matrix.

E7.3 Construction Method

- (a) Engineered Wood Fibre shall be installed within all the play areas defined by the timber edging in min 300mm depth or as required by CSA standards.
- (b) The filter fabric and drain matrix should be laid in such a way that it maintains the existing Site slopes and drains the rainwater.
- (c) The installation of the Engineered Wood Fibre shall be done immediately after the play structure has been installed.
- (d) Installation shall be done by equipment sized to suit the Work being done and the Engineered Wood Fibre shall be spread by hand as necessary in the immediate vicinity of the play structures and existing trees so as not to damage same. The play structures shall be swept clean to the satisfaction of the Contract Administrator after installation of the Engineered Wood Fibre.

E7.4 Method of Measurement and Basis of Payment

E7.4.1 Wood will be measured on a unit price basis per square meter on Form B: Prices for:

- (a) Engineered Wood Fibre play area A
- (b) Engineered Wood Fibre play area B

E7.4.2 Engineered Wood Fibre will be paid for at the Contract Unit Prices for 300mm depth. The amount to be paid for shall be the total number of units, as indicated by the Bidder on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, drainage and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E8. TIMBER EDGING

E8.1 Description

- (a) This specification shall cover new double tier edge as per Drawing SK-3.
- (b) Timber edging shall be subject to inspection and approval by the Contract administrator.

E8.2 Materials

- (a) All wood shall be spruce, pine or fir, No.2 or better, no wane, bark, or splitting permitted. Wood shall be smooth and free of rough areas. All timbers to be 3650x150x 150 mm with a minimum length of 1200 mm as necessary for construction purposes. Top edges of all exposed timbers shall have 8 mm (45⁰) chamfer.
- (b) The timber edging below grade or in contact with the ground, shall be pressure treated as approved for use by Environment Canada and treated to CSA 080.83 PWF. All ends and cuts shall be treated with preservative before being secured.
- (c) The exposed timber edging above grade shall not be pressure treated. The wood shall be stained with a semi-transparent stain that matches the light green colour of the pressure treated timbers. Submit stain product and colour sample for the Contract Administrator's approval prior to application.

E8.3 Construction Methods

- (a) Base course timbers shall be pinned with a minimum of two (2) 19mm Ø by 900 mm rebar at maximum 1200 mm c/c. Second tier of timber above base course shall be securely spiked with a minimum of two (2) 12mm Ø by 250 mm spikes at maximum 1200 c/c. **All**

timbers shall be cut neatly for a proper fit with no spaces or gaps between to form a smooth curve as shown on the Drawing A3-HX2. Finished elevations shall ensure that all timbers are smooth, level, set plumb and spaced uniformly. Turf shall be repaired as required around edging in accordance with E13.

E8.4 Method of Measurement and Basis of Payment

- (a) Payment shall be paid at the Contract Unit Price measured by the linear metre for the
 - (i) Timber Edging in play area A
 - (ii) Timber Edging in play area B
- (b) Timber edging will be paid for at the Unit Prices to supply and install single tier (Non pressure-treated) or double tier timber edging (Pressure treated or stained) 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.

E9. ASPHALT REPAIRS

E9.1 Asphalt repairs shall be done in accordance with City of Winnipeg's Standard Construction Specification CW3410-R6 Asphaltic Concrete Pavement Works.

E9.2 The amount to be paid for shall be the total number of units, approved by Contract Administrator prior to Work, as indicated by the Bidder 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.

E10. SHRUBS

E10.1 Description

- (a) This specification shall cover the supply and installation of nursery shrubs and shrub bed installation, including topsoil and woodchip mulch.
- (b) The City reserves the right to reduce the quantity of shrubs and shrub beds installed in order to meet the budgetary constraints.

E10.2 Materials

- (a) Nursery stock
 - (i) All nursery stock supplied shall be Canadian prairie nursery grown, of the species and sizes indicated on the drawings. Quality shall be in accordance with the latest "Guide Specification for Nursery Stock of the Canadian Nursery Trades Association".
 - (ii) Any nursery stock dug from native stands, wood lots, orchards or neglected nurseries and which have not received proper cultural maintenance as advocated by the Canadian Nursery Trades Association, shall be designated as "collected plants". The use of "collected plants" will not be permitted unless approved by the Contract Administrator.
 - (iii) The Contract Administrator reserves the right to inspect the plant material at their original source, and to instruct the supplier on root and branch pruning requirements.
 - (iv) Nomenclature of specified nursery stock shall conform to the International Code of Nomenclature for Cultivated Plants and shall be in accordance with the approved scientific names given in the latest edition of standardized Plant Names. The names of varieties, not names therein, are generally in conformity with the names accepted in the nursery trades.

- (v) Plants larger than specified may be used if approved by the Contract Administrator. The use of such plants shall not increase the Contract price.
- (vi) All nursery stock shall be measured when the branches are in their normal position. Height and spread dimensions specified refer to the main body of the plant and not from branch tip.
- (vii) All nursery stock shall be well branched, true to type, structurally sound, possess a well developed, undamaged root system and shall be free of disease, insect infestations, rodent damage, sunscald, frost cracks and other abrasion or scars to the bark. All parts of the nursery stock shall be moist and show live, green cambium when cut.
- (viii) At least one plant of each variety supplied shall bear a tag showing both the botanical and common name of the plant.
- (ix) Protection of Stock
 - (i) All nursery stock shall be well protected from damage and drying out from the time of digging until the time of planting on Site. All roots shall be cleanly cut; split roots are not acceptable.
 - (ii) Nursery stock shall be transplanted with care to prevent damage. Branches shall be carefully tied in such a manner so as not to break or damage trunks. Points of contact with equipment shall be padded. All nursery stock, which cannot be planted immediately upon arrival at the Site, shall be well protected to prevent drying out and shall be kept moist until commencement of planting.
- (b) Shrub bed preparation
 - (i) Backfill mix shall be screened garden soil mixture of two parts black loam topsoil, one part milled peat moss and one part sharp sand.
 - (ii) Wood Chip Mulch
 - Mulch shall be a clean bark or wood chip mulch with chips not less than 15 mm nor larger than 75 mm in size and not less than 15 mm thick. Mulch shall be free of leaves, branches and other extraneous matter.

E10.3 Construction Methods

- (a) General
 - (i) Shrub beds shall be excavated to the required depth and refilled with topsoil and woodchip mulch.
- (b) Installation
 - (i) Planting shall be done during periods suitable to weather conditions and locally accepted practice. All nursery stock shall be set plumb in the centre of pits and at levels as shown on the planting details after settlement has taken place.
 - (ii) Nursery stock shall be faced to give the best appearance or relationship to adjacent structures and to the approval of the Contract Administrator.
 - (iii) Install woodchips.
- (c) Guarantee of Nursery Stock
 - (i) The Contractor shall agree and guarantee to replace and replant any nursery stock found dead and/or in poor condition within two years from the date of the Certificate of Total Performance, at his cost. "Poor condition" shall be interpreted as meaning nursery stock on which branches are dying, or have not shown satisfactory growth of leaves. All replacements plants shall be installed within from the date of notification from the City, unless the City extends the time period, as a result of seasonal or climatic considerations.
 - (ii) Exempted is nursery stock damaged by accidental causes or vandalism, which stock shall be replaced at the cost of the City.

- (iii) All required replacements shall be by plants of at least the same size and species as specified, and shall be supplied and planted in accordance with the original drawings and Specifications, and the replaced material shall carry an additional two-year guarantee and maintenance period.

(iv) PLANT LIST

Quantity	Common Name/botanical name	Size / Remarks
8	Goldflame Spirea ' <i>Spiraea x bumalda</i> 'Goldflame' .	No. 1 Grade plants, 3 or more strong canes, with at least 2 canes measuring a min. of 40cm in length, Container 2 Gallon
8	Dwarf Korean lilac ' <i>Syringa meyeri</i> 'Paliban'	No. 1 Grade plants, 3 or more strong canes, with at least 2 canes measuring a min. of 40cm in length, Container 2 Gallon
2	Golden variegated dogwood ' <i>Cornus alba</i> 'Gouchaultii'	No. 1 Grade plants, 3 or more branches. Min 1800mm height. Container 5 Gallon.

E10.4 Method of Measurement and Basis of Payment

E10.4.1 Plant Material

- (a) The supply and installation of Plant Material will be paid for at the Contract Unit Price for the following items: Item No 9-Shrubs-

- (i) Goldflame Spirea '*Spiraea x bumalda* 'Goldflame' ,
- (ii) Dwarf Korean lilac '*Syringa meyeri* 'Paliban'
- (iii) Golden variegated dogwood '*Cornus alba* 'Gouchaultii'

E10.4.2 Shrub Bed and Wood Chip Mulch

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, per square metre, for the following items:

- (i) Item No.9 - Shrub bed

E10.5 Shrub Bed and Plant Material will be paid for at the Contract Unit Prices as indicated on Form B: Prices. The amount to be paid for shall be the total number of units on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, performing all operations herein described, including shrubs, topsoil backfill, excavation of the shrub bed, installation of the topsoil, the supply and installation of the wood chip mulch, and all other items incidental to the Work and as accepted by the Contract Administrator.

E11. TREES

E11.1 Description

E11.1.1 This specification shall cover only the supply and installation of nursery grown trees Please refer to E12 for tree maintenance. The City reserves the right to reduce the quantity of trees installed in order to meet the budgetary constraints.

E11.2 Materials

E11.2.1 General

- (a) Trees shall be the size and variety noted on the Plant List attached to the end of this specification section. Trees, which do not have the specified root ball diameter as mentioned in plant list, will be rejected;

- (b) All trees supplied shall be Canadian prairie nursery grown, of the species and sizes indicated on the drawings. Quality shall be in accordance with the latest "Guide Specification for Nursery Stock of the Canadian Nursery Trades Association";
- (c) Trees dug from native stands, wood lots, orchards or neglected nurseries and which have not received proper cultural maintenance as advocated by the Canadian Nursery Trades Association, shall be designated as "collected plants". The use of "collected plants" will not be permitted unless approved by the Contract Administrator;
- (d) The Contract Administrator reserves the right to inspect the plant material at their original source, and to instruct the supplier on root and branch pruning requirements;
- (e) Nomenclature of specified trees shall conform to the International Code of Nomenclature for Cultivated Plants and is to be in accordance with the approved scientific names given in the latest edition of the Standardized Plant Names;
- (f) Trees larger than specified may be used if approved by the Contract Administrator. The use of such plants shall not increase the Contract price;
- (g) Where trees are measured by calliper (cal.), reference is made to the diameter of the trunk measured 300 mm above ground as the tree stands in the nursery;
- (h) All trees shall have only one, sturdy, reasonably straight and vertical trunk and a well balanced crown with fully developed leader. All evergreens shall be symmetrically grown and branched from ground level up, and must be balled and burlapped unless noted otherwise on the plant list. Root ball burlap shall be 150 grams Hessian burlap, biodegradable;
- (i) Trees shall be free of disease, insect infestation, rodent damage, sun scald, frost cracks, abrasions, unhealed scars, scars exceeding 5 cm in diameter, major forks or crooks in the trunk, broken branches, or angled leaders. Trees having the above defects will not be accepted by the Contract Administrator.

E11.2.2 Plant List

Quantity	Common Name/botanical name	Size / Remarks
5	American Basswood / <i>Tilia americana</i>	Min. 65 mm calliper, 3000 mm height. Single straight trunk. Specimen quality. Well branched head above 1830 mm height. Minimum 800 mm dia. root ball. Two stakes per tree.
5	Discovery Elm / <i>Ulmus davidiana</i>	Min. 65 mm calliper, 3000 mm height. Single straight trunk. Specimen quality. Well branched head above 1830 mm height. Minimum 800 mm dia. root ball. Two stakes per tree. .

E11.2.3 Protection of Stock

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

E11.2.4 Topsoil Backfill Mix

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

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

E11.2.5 Stakes

- (a) T-rail iron stakes 40 x 40 x 5 x 1540 mm long, primed with one (1) brush coat of black zinc rich plant paint to CGSB 1-GP-181B. Paint section of stake above ground with 1 coat of green enamel paint.

E11.2.6 Wood Chip Mulch

- (a) Mulch shall be a clean bark or wood chip mulch with chips not less than 15 mm nor larger than 75 mm in size and not less than 75 mm thick. Mulch shall be free of leaves, branches and other extraneous matter.

E11.2.7 Fertilizer

- (a) Fertilizer shall be a slow release formulation of low nitrogen and high phosphorus e.g. 10-50-12. Apply quantities at rates stated by product manufacturer and to the satisfaction of the Contract Administrator.

E11.3 Construction Methods

E11.3.1 General

- (a) Tree pits shall be excavated as per detail on Drawing No. Sk-1. The excavated tree pits shall be refilled with backfill mix (E11.2.4). Hand dig pits where required to protect underground utilities.

E11.3.2 Installation

- (a) Upon excavation of the tree pits, and protection of any underground utility lines, the holes shall be backfilled with a topsoil mixture to a depth to permit adequate installation and stabilization of the plant material;
- (b) Each balled specimen shall be handled with great care, to ensure that the root balls will not be broken. Burlap shall be folded back only at the top and sides. Broken roots of deciduous stock shall be pruned back prior to planting;
- (c) After inserting the tree and filling the planting hole with topsoil, water shall be poured in until the pit is thoroughly soaked. Water shall be potable and free of minerals which may be detrimental to plant growth. Filling of the hole shall then be completed and the fill-in soil shall be packed firmly around the roots, leaving a concave surface for convenient watering 75 mm below rounding and grade elevation. After filling, the planting shall be watered at frequent intervals;
- (d) Planting shall be done during periods suitable to weather conditions and locally accepted practice. All trees shall be set plumb in the centre of pits and at levels as shown on the planting detail drawing after settlement has taken place;
- (e) Nursery stock shall be faced to give the best appearance or relationship to adjacent structures and to the approval of the Contract Administrator;
- (f) Wood chip mulch shall be installed over the tree root ball as shown on the Drawing No. Sk-1.

E11.3.3 Pruning

- (a) All deciduous trees shall be pruned immediately after planting. The amount of pruning shall be limited to the minimum necessary to remove dead or injured branches and to compensate for the loss of roots as a result of transplanting operations. Pruning shall be done in such a manner as to preserve the natural character of the plants. Leaders shall not be removed. Only clean, sharp tools shall be used. All cuts shall be clean

and flush, leaving no stubs. Cuts, bruises or scars on the bark shall be traced back to living tissue and removed. The affected areas shall be shaped so as not to retain water and all cuts of more than 25 mm in diameter shall be painted with approved tree paint.

E11.3.4 Staking (If required)

- (a) If required, trees shall be staked using metal T-BAR stakes. Refer to Drawing No. Sk-1. The tree trunk shall be completely encircled and protected with two rubber tree rings and secured to each tree stake. Top of each tree stake shall be at the same elevation above finished grade, approximately 1200 – 1500 mm height. At the end of the two-year maintenance period the Contractor is to remove and legally dispose of the tree stakes and associated fasteners.

E11.3.5 Guarantee of Trees

- (a) The Contractor shall guarantee and agree to replace and replant any tree found dead and/or in poor condition within two years from the date of the Certificate of Total Performance, at his cost. "Poor condition" shall be interpreted as meaning trees on which branches are dying, or have not shown satisfactory growth of leaves. All replacement trees shall be installed within 20 days from the date of notification from the City, unless the City extends the time period, as a result of seasonal or climatic considerations.
- (b) Exempted are the trees damaged by accidental causes or vandalism, which stock shall be replaced at the cost indicated in the original Bid, which will be paid by the City.
- (c) All required replacements shall be trees of at least the same size and species as specified, and shall be supplied and planted in accordance with the original drawings and Specifications, and the replaced material shall carry an additional two-year guarantee and maintenance period. All trees must be in a healthy conditional for a full two years before the warranty will be considered fulfilled.

E11.4 Basis of Payment

- (a) The supply and installation of trees itemized under "Trees" in accordance with E11.2 will be paid for at the Contract Unit Price for each tree measured as specified herein, which price shall be payment in full including all costs for the tree, tree pit and topsoil backfill, tree stakes, pruning, and all other items incidental to the Work included in this Specification.

E12. TREE AND SHRUB MAINTENANCE

E12.1 Description

- (a) This specification shall cover the landscape maintenance requirements for all shrubs, trees and associated tree pits

E12.2 Related Work

- (a) Plant material and tree pits are specified elsewhere in this Specification and form an integral part to all Work described herein.

E12.3 Maintenance Period

- (a) Undertake maintenance from the date of installation for a period of two years past the date of Total Performance.

E12.4 Description of Work

- (a) Maintain trees shown on the drawings, to the satisfaction of the Contract Administrator;
- (b) Work includes:

- (i) Fertilizing;
- (ii) Watering;
- (iii) Weed Control of tree pits, wood chip mulch areas;
- (iv) Pest and disease control;
- (v) Pruning;
- (vi) Mulching;
- (vii) Tree support and tie adjustment;
- (viii) Winter protection.

E12.5 Protection

- (a) Prevent damage to fencing, other trees, landscaping, bench marks, building, pavement, surface and underground utility facilities.

E12.6 Materials

- (a) Materials are to conform to the requirements of related specifications. Refer to E11.2 and E10.2

E12.7 Maintenance Requirements

- (a) Condition of Equipment
 - (i) Prior to the commencement of tree planting, the Contractor will be required to arrange to have the equipment to be supplied under this Contract inspected by the Contract Administrator to verify that the equipment is in good operating condition and meets the requirements of the Specifications.
- (b) Replacement Equipment
 - (i) The supply of replacement equipment of equal or larger size, if regular units are under repair, will be the responsibility of the Contractor.
- (c) General Workmanship
 - (i) Program timing of operations to growth, weather conditions and use of Site;
 - (ii) Do each operation continuously and completely, within the reasonable time period;
 - (iii) Store equipment and materials off-Site;
 - (iv) Collect and dispose of debris or excess material on daily basis.

E12.8 Fertilizing

- (a) Apply fertilizer no later than May 30th of each maintenance year.

E12.9 Watering

- (a) Apply water as required to supplement rainfall and to maintain optimum growing conditions. In general, water once a week to achieve rates as indicated below. Allow soil to dry adequately between watering to prevent over-saturation without creating water stress;
- (b) Subject to the requirements above, the Contractor must water at least once a week inclusive between May 1st and October 30th. A complete record is to be kept of each series of waterings for all planted and transplanted trees, noting: 1) location, and 2) date of watering. This record is to be given to the Contract Administrator when requested;
- (c) Apply 40 litres of water per 25mm caliper, per application using deep root feeder or low pressure open flow nozzle and hose. The water stream must not gouge out a hole in the soil and mulch.

E12.10 Weed Control

- (a) Maintain surface of tree pit, shrub bed and mulched areas, free of weeds. Do not allow weeds to establish for a period longer than one (1) week;
- (b) Do not use dicamba and picloram solutions near trees.

E12.11 Pests and Diseases

- (a) Obtain written approval from the Contract Administrator prior to using any pesticide;
- (b) Control pests and disease through pruning or application of pesticides. Use species specific pesticides where possible. Use only pesticides of low mammalian toxicity. Strictly follow manufacturer's written instructions.

E12.12 Pruning

- (a) The Contractor shall provide a person with a valid Manitoba Tree Pruner's License for each Work crew or Work Site;
- (b) Prune trees as required to remove dead, broken or damaged limbs. Prune back to healthy growth while maintaining balanced crown shape;
- (c) Employ clean sharp tools. Make cuts coincident with the branch collar near the main stem or branch. Cuts must be smooth and sloping to prevent accumulation of water on cut. Do not leave little stumps ("horns") on trunks or main branches;
- (d) Prune trees according to accepted horticultural practices as outlined in the Pruning Manual, Publication No. 1505 by Agriculture Canada.

E12.13 Mulching

- (a) Add mulch as required to maintain 75 mm thickness.

E12.14 Tree Supports and Tie Adjustments

- (a) Maintain tree supports and ties in proper repair;
- (b) Remove supports and ties at end of two year maintenance period or earlier if directed by the Contract Administrator;
- (c) Straighten any tree, which is leaning.

E12.15 Winter Protection

- (a) Ensure adequate moisture in tree zones prior to freeze-up;
- (b) Apply anti-desiccant to evergreen trees susceptible to winter desiccation as directed by Contract Administrator.

E12.16 Maintenance Period and Schedule

- (a) The Contractor shall provide a complete written maintenance schedule to the Contract Administrator prior to the commencement of the two-year maintenance period, and must provide weekly reports of all maintenance to the City of Winnipeg, Assiniboine Park Enterprises, within one week of the maintenance being provided.
- (b) All the maintenance operations should be performed during the day between 8:00 am to 4:00 pm

E12.17 Basis of Payment

- (a) The cost of tree and plant maintenance shall be paid for the Contract Unit Price per unit for the Work mentioned above including all other items incidental to the Work.

E13. TOPSOIL AND SODDING

- E13.1 Depending on the design, the Bidder is expected to sod the areas where play equipment or part has been removed, existing gravel areas and the areas damaged during the construction that are not being developed.
- E13.2 Topsoil and finish grading and Sodding shall be done in accordance with City of Winnipeg's Standard Construction Specification CW3540-R4 Topsoil and Finish Grading for establishment of Turf areas and 3510 –R8 Sodding.
- E13.2.1 Notwithstanding Clause 9.8 of the City of Winnipeg's Standard Construction Specification CW3540-R8 - Maintenance of sodded area is changed from 30 days to 60 days.

E14. PLAY EQUIPMENT

E14.1 General

- (a) This specification shall cover the supply and installation of play equipment as specified herein or approved equal;
- (b) The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the specifications;
- (c) Play equipment shall be installed as shown on Drawing A3-HX2. The Components and their safety zones must fit into the proposed play area;
- (d) If submitting a substitute it must be in accordance with B6.4 and will be evaluated based on efficiency and good use of space, uniqueness of components, use of zoo related themes.

E14.2 Playstructure

E14.2.1 Description

- (a) This specification shall cover the supply and installation of Playstructure with '**Safari Vehicle**' theme in Play area-B as specified herein-
 - (i) Play structure to be designed primarily for children ages 2-5 years old.
 - (ii) Proposed play structure should have "Safari Vehicle" theme with minimum one plastic slide, one overhead climber, 2 climbers, 3 decks and 3 play panels.
 - (iii) The Play structure and their safety zones must fit within the construction limit area as shown on Drawing A3-HX2.
- (b) 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.

E14.2.2 Materials

- (a) Posts / Caps
 - (i) All posts shall be a minimum 5" O.D. round or 4" square tubing.
 - (ii) 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 above 4'.
 - (iii) All posts shall be fabricated from either aluminium (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 post is to be sealed with a moisture barrier.

- (iv) 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.
- (v) 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.
- (b) Decks
 - (i) 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'.
- (c) Clamping System
 - (i) All deck, rail and play component clamping systems shall be fabricated from zinc plated, galvanized steel, stainless steel or aluminium. Tamper proof, corrosion resistant fasteners shall be used to retain clamping systems.
- (d) Handrails, Safety Rails and Handloops
 - (i) All handrails, safety rails and handloops shall be fabricated using a minimum of 15/16" (24mm) O.D. with 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.
 - (ii) 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.
- (e) Hardware
 - (i) 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.
 - (ii) All necessary hardware shall be provided.
- (f) Poly Components
 - (i) Poly components such as slides and hoods shall be fabricated from U.V. stabilized, rotationally moulded linear low-density polyethylene.
 - (ii) Poly components such as play panels shall be fabricated from compression moulded solid colour, U.V. stabilized, high-density polyethylene.
- (g) Slides
 - (i) A plastic slide may be used
- (h) Each playstructure shall have kick plates and hand loops as required to meet the most recent Canadian Standards Association Guidelines.

E14.2.3 Construction Methods

- (a) Play structures shall be installed as per Manufacturer's specifications and in accordance with the most recent 'Canadian Standards Association Standards'. All Work is to be located and installed in accordance with the Drawings using approved non-rusting, vandal resistant fasteners to ensure solid, durable, finished work suitable for the purpose intended.
- (b) All posts and other vertical items to be installed plumb and true to correct elevations and location, as directed by the Contract Administrator. The Contractor shall confirm proposed locations of all play equipment with Contract Administrator prior to installation.
- (c) All decks shall be levelled, if so designed.
- (d) All workmanship and all materials furnished and supplied under this Specification are subject to close and systematic inspection and testing by the Contract Administrator including all operations, from the selection and production of materials, through to final acceptance of the Work. The Contractor shall be wholly responsible for the control of

all operations incidental thereto notwithstanding any inspection of approval that may have been previously given. The Contract Administrator reserves the right to reject any materials or works that are not in accordance with the requirements of these Specifications.

E14.3 Independent Components

E14.3.1 Description

- (a) This specification shall cover the supply and installation of Independent Components in Play area –A as specified herein and shown on the Drawing A3-HX2
- (b) The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the specifications.

E14.4 Materials

E14.4.1 All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all parts and materials:

- (a) Landscape Structure. Supplier: Playgrounds-R-Us 204-632-7000
 - (i) Rock and Ridge
 - (ii) Toddler rock with tunnel
 - (iii) Saddle spinners- two 24" and one 20" in height.
- (b) Slide
 - (i) An independent min 1.2 m tall stainless steel slide with support posts minimum 5"O.D. and Giraffe permelene panel on both sides. Tube (enclosed) slides and plastic spiral slides will not be accepted. The Contractor should get approval from Contract Administrator before ordering the slide.
- (c) Spring riders – Two spring riders with unique animal theme.
- (d) 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.
- (e) Finishes

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.

E14.5 Maintenance Kits

- (a) 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.
- (b) All the maintenance kits shall be given to the Zoo Coordinator after the final completion.

E14.6 Foundations

E14.6.1 General Description

- (a) All playground equipment posts, bases and anchors are to be set in concrete footings or piles to ensure stability and prevent frost heaving. The current Standard Construction Specifications of the City of Winnipeg, CW 2160-R4 - Concrete to be used in Underground Works, is to be utilized in the installation of the concrete works for all below ground components;

- (b) 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;
- (c) All concrete footings for play equipment shall be a minimum of 3' depth, or in accordance with Manufacturer's specifications, whichever is greater;
- (d) The specific concrete requirements shall be:
 - (i) Sulfate resistant, Type 50 Cement;
 - (ii) 28 day compressive strength of 30 Mpa;
 - (iii) maximum aggregate size of 20 mm, nominal;
 - (iv) slump 80 +/- 20 mm;
 - (v) maximum water/cement ratio 0.49.

E14.7 Method of Measurement and Basis of Payment

E14.7.1 Measurement will be on a lump sum basis for all the play equipment proposed including foundations and related excavation Play equipment will be paid on a lump sum basis as indicated on Form B: Price for:

- (a) Supply and install new play equipment.

E14.7.2 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 including foundations, related excavation and as accepted by the Contract Administrator.

E15. DRINKING WATER FOUNTAIN

E15.1 Description

- (a) This specification shall cover the replacing existing drinking water fountain with new drinking water fountain with animal or zoo related theme.
- (b) The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the specifications including removal of existing fountain, foundations etc..

E15.2 Materials

- (a) The proposed drinking water fountain should have animal or zoo related theme.
- (b) 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.
- (c) 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.

E15.3 Construction Methods

- (a) The existing concrete drinking water fountain should be removed in such a way that there are no water puddles on the site. The concrete base around existing base should remain as it is.
- (b) The new drinking water fountain should be installed as per manufacturer's instructions including foundation.

E15.4 Method of Measurement and Basis of Payment

E15.4.1 Supply and installation of the drinking water fountain will be measured on a Unit Price basis per number on Form B: Prices for

(a) Drinking Water Fountain

E15.4.2 The amount to be paid for shall be the total number of units, as indicated by the Bidder on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, foundation, removal of existing drinking water fountain, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E16. SITE RESTORATION

E16.1 Total Performance of the Work shall not be attained until the Contractor has cleaned up the Site and has removed all plant, tools, equipment, waste, debris and surplus foundation earth to the satisfaction of the Contract Administrator. Unless otherwise specified, the Contractor shall restore all areas of the Site beyond the established limit of Work, which have been disturbed by the Contractor's operations to as good as or better than the original condition to the satisfaction of the Contract Administrator. The Contractor shall pay all costs associated with this Work.