



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 557-2009**

**LIZZIE PLAYGROUND SITE WORKS**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 LIZZIE PLAYGROUND SITEWORKS

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, August 10, 2009

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

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

### **B3. SITE INVESTIGATION**

B3.1 Further to C3.1, the Bidder may view the Site without making an appointment.

### **B4. ENQUIRIES**

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

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

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

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

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

### **B5. ADDENDA**

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

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

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

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

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

## **B6. SUBSTITUTES**

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
  - (c) identify any anticipated cost or time savings that may be associated with the substitute;
  - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
  - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.7, deviations in consistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

## **B7. BID COMPONENTS**

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

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

- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B7.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
185 King Street, Main Floor  
Winnipeg, MB R3B 1J1
- B7.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.
- B7.6 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B14.1(a).
- B7.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.
- B7.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.
- B7.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

**B8. BID**

- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his 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 should be printed below such signatures.
- B8.4.2 All signatures shall be original.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 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.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B9.4 Prices from Non-Resident Bidders are subject to a Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B10. QUALIFICATION**

- B10.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
  - (b) be financially capable of carrying out the terms of the Contract; and
  - (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>
- B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) have successfully carried out work similar in nature, scope and value to the Work; and

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

B10.4 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B10.5 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.

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

B11.1 Bids will not be opened publicly.

B11.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>

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

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

### **B12. IRREVOCABLE BID**

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

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

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

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

B13.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.

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

B13.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Bid until after the Submission Deadline has elapsed;
- (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and



- (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.

B13.2 A Bidder who withdraws his 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 or acceptable deviation there from (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
- (c) economic analysis of any approved alternative pursuant to B6.

B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.

B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid 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.

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

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

#### **B15. AWARD OF CONTRACT**

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

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

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

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

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- B15.3 Subject to B15.2, where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the responsive Bid, having the highest points based on evaluation criteria.
- B15.3.1 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.
- B15.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B15.5 The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

## PART C - GENERAL CONDITIONS

### C0. GENERAL CONDITIONS

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

## **PART D - SUPPLEMENTAL CONDITIONS**

### **GENERAL**

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

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

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

D2.1 The major components of the Work to be done under the Contract shall consist of:

- (a) Excavation and Disposal;
- (b) Rough Grading;
- (c) Supply and Installation of asphalt pathway;
- (d) Supply and Installation of granular pathway and seating areas;
- (e) Supply and Installation of soil and sod;
- (f) Supply and Installation of soil and seed;
- (g) Removal and Relocation of existing motion sensor light;
- (h) Supply and Installation of park style lights;
- (i) Supply and Installation of subsurface drainage;
- (j) Supply and Installation of site furniture;
- (k) Supply and Installation of shrub beds and associated plant material; and,
- (l) Supply and Installation of fencing (post and chain as well as chain-link gate)

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

D3.1 The Contract Administrator is:

Shauna Prociuk  
Urban Designer  
City of Winnipeg  
Parks, Riverbanks and Community Initiatives Branch  
Planning and Land Use Division  
Planning, Property and Development Department  
15-30 Fort Street  
Winnipeg, MB R3C 4X5  
  
Telephone No. (204) 986-3938  
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 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 address or facsimile number:
- The City of Winnipeg  
Chief Financial Officer  
Administration Building, 3rd Floor  
510 Main Street  
Winnipeg MB R3B 1B9  
Facsimile No.: (204) 949-1174
- D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:
- The City of Winnipeg  
Internal Services Department  
Legal Services Division  
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 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 C 4.1 for the return of the executed contract.

D11.2 Detailed Work Schedule shall consist of the following dates:

- (a) Start date;
- (b) Excavation & disposal;
- (c) Installation of park lighting;
- (d) Installation of asphalt pathway;
- (e) Installation of granular pathway and seating areas;
- (f) Installation of site furniture;
- (g) Installation of soil, sod and seed;
- (h) Installation of shrub beds and associated plant materials; and,
- (i) Expected completion.

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

## **SCHEDULE OF WORK**

### **D12. COMMENCEMENT**

D12.1 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.

D12.2 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) detailed work schedule specified in D11.
- (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 commence work within seven days of the receipt of the purchase order.

### **D13. SUBSTANTIAL PERFORMANCE**

D13.1 The Contractor shall achieve Substantial Performance within twenty (20) consecutive Working Days of the commencement of the Work as specified in D12.

D13.2 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.

D13.3 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.

#### **D14. TOTAL PERFORMANCE**

- D14.1 The Contractor shall achieve Total Performance within twenty-five (25) consecutive Working Days of the commencement of the Work as specified in D12.
- D14.2 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.
- D14.3 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.

#### **D15. SITE RESTORATION**

- D15.1 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, 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.

#### **D16. LIQUIDATED DAMAGES**

- D16.1 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) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.
- D16.2 The amount specified for liquidated damages in D16.1 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.
- D16.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

#### **D17. EXISTING SERVICES AND UTILITIES**

- D17.1 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.

#### **D18. ACCESS TO SITE**

- D18.1 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.
- D18.2 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.

#### **D19. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES**

- D19.1 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.

- D19.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.
- D19.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.
- D19.4 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Act.
- D19.5 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Fall Protection guidelines.
- D19.6 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.

## **D20. DAMAGE TO EXISTING STRUCTURES, TREES AND PROPERTY**

- D20.1 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 City of Winnipeg Contract Administrator, and the cost of which shall be borne entirely by the Contractor. The Contractor shall also indemnify and save harmless the City from all claims made directly or indirectly against it in respect to any such damage.
- D20.2 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:
  - (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment within 2 metres of trees.
  - (b) 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.
  - (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), 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.
  - (d) 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.
- D20.3 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.
- D20.4 No separate measurement or payment will be made for the protection of trees.

## **D21. PEDESTRIAN SAFETY AND TRAFFIC MANAGEMENT**

- D21.1 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 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.
- D21.2 Ambulance/ Emergency vehicle access must be maintained at all times.

## **D22. PROTECTION OF THE SURVEY INFRASTRUCTURE**

- D22.1 Notwithstanding clause 4 "Protection of Survey Bars" of the Standard Provisions; Current legislation, The Surveys Act, places the onus on those undertaking construction to protect the Survey Infrastructure from damage as a result of their activity.
- D22.2 Further to C:6.26 (g), at least 72 hours prior to the commencement of the On-Site Work the Contractor shall contact the City of Winnipeg, Geomatics Services Branch at 986-4826 (8:00 am to 4:00 pm Monday to Friday excluding holidays) to obtain underground clearance. Geomatics Services will locate and mark all known outline survey monuments and geodetic control monuments and confirm the physical condition of those monuments upon completion of construction, at no cost to the Contractor.
- D22.3 Where a survey post, bar or control monument lies in the line of the proposed Work and must be disturbed, the Contractor shall provide the Contract Administrator with 48 hours notice to permit referencing for future replacement, at no cost to the Contractor. Failure to provide the specified notice shall result in the Contractor paying for all costs associated with replacing or relocating the disturbed outline survey monuments and geodetic control monuments.
- D22.4 Survey monuments and geodetic control monuments at or adjacent to the Site, not in the line of the proposed construction that are damaged or disturbed by the Contractor shall be replaced or relocated by the City or its agent and all associated costs shall be paid for by the Contractor. An approximate estimate of the costs involved to restore a legal survey monument is \$1,000 per bar and \$3,000 per control monument. Contractors must ensure their landscaping and other subcontractors are aware of this clearance procedure and the potential restoration costs.
- D22.5 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.

## **D23. SITE ENCLOSURES**

- D23.1 Temporary Site enclosures, as determined necessary at the pre-construction meeting, shall be erected and maintained as required for the duration of the construction period.
- D23.2 Site enclosures shall be considered incidental to the Contract Work.

## **CONTROL OF WORK**

### **D24. JOB MEETINGS**

- D24.1 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.

D24.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

**D25. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

D25.1 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**

**D26. PAYMENT**

D26.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

**WARRANTY**

**D27. WARRANTY**

D27.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter, except where longer warranty periods are specified in the respective Specification sections, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

D27.1.1 For the purpose of Performance Security, the warranty period shall be one (1) year.

**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.

LIZZIE PLAYGROUND SITE WORKS

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  
Internal Services Department  
Legal Services Division  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 557-2009  
LIZZIE PLAYGROUND SITE WORKS

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

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

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

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

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

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

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

Partial drawings are permitted.

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

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

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

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

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

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

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

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

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

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

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

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





## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
L.2-K1	LIZZIE PLAYGROUND – EXISTING CONDITIONS AND REMOVALS – SITE WORKS
L.2-K2	LIZZIE PLAYGROUND – PROPOSED – SITE WORKS
L.2-K3	LIZZIE PLAYGROUND – GRADING PLAN – SITE WORKS
L.2-K4	LIZZIE PLAYGROUND – PLANTING PLAN – SITE WORKS
L.2-K5	LIZZIE PLAYGROUND – LAYOUT PLAN – SITE WORKS
SCD-645A	PARK PATH CRUSHED LIMESTONE
SCD-648	PARKWAY PATH ASPHALT
SCD-119	WASTE RECEPTACLE METAL SLAT TYPE
SCD-105A	POST AND CHAIN FENCING
SCD-501A	PREPARATION OF SHRUB BED
SCD-717A	PARK SIGN INSTALLATION
SCD-652	PARK LIGHT BASE DETAIL

- E1.4 Above Drawings are available on request in AutoCAD .dwg or Vectorworks format from the Contract Administrator.

### Site Development

#### E2. REMOVALS

- E2.1 General Description
- E2.1.1 This specification shall cover the removal and legal disposal of existing structural foundations of park lighting that is identified on plan to be removed. 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.
- E2.2 Materials
- E2.2.1 Removals include the removal of items as indicated on the Drawings and as directed by the Contract Administrator. These items may be salvaged by the City, as per direction by the Contract Administrator. Do not disturb adjacent items designated to remain in place.
- E2.3 Construction Methods

- E2.3.1 Removals include the removal of all footing, backfilling holes with clean earth fill and compact to 98% SPD.
- E2.3.2 The Contractor shall ensure that upon completion of the removal operations, the Site shall be left free of any hazardous depressions and in a neat condition.
- E2.3.3 The Contractor shall dispose of all unsuitable and excess materials in accordance with City of Winnipeg Specifications. Disposal is incidental to the unit prices bid.
- E2.4 Method of Measurement and Basis of Payment
- E2.4.1 Method of Measurement shall be as follows:
- (a) Removals will be measured on a lump sum basis for: "Remove and legally dispose existing park light and structural foundation" on Form B: Prices.
- E2.4.2 Basis of Payment shall be as follows:
- (a) Removals will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated 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.

### **E3. EXCAVATION AND GRADING**

#### **E3.1 General Description**

- E3.1.1 This specification shall cover the excavation and legal disposal of existing surfacing to accommodate new surfacing materials and installations. It shall amend and supplement CW 3110 and CW 3170.
- E3.1.2 Work shall include but not be limited to the following:
- (a) Excavate, legally dispose, add clean fill if necessary, and rough grade excess soil/sand/asphalt to the limits shown on Drawing L.2-K1 to the depths necessary to achieve finish grade for:
    - (i) Topsoil and Sod that is to cover area of existing asphalt pathway to be removed;
    - (ii) Topsoil and Sod that is to cover former handball court;
    - (iii) Topsoil and Sod that is to cover Former play area;
    - (iv) Topsoil and Sod that is to cover Grading around New Play Area.
    - (v) Shrub beds;
    - (vi) Granular path and seating areas; and
    - (vii) New asphalt path.

#### **E3.2 Materials**

- E3.2.1 All fill materials shall conform to CW 3170.

#### **E3.3 Construction Methods**

- E3.3.1 Excavation includes the removal of items (i.e., sand, asphalt, earth) as indicated on the Drawings and as directed by the Contract Administrator. Work includes the satisfactory disposal of unsuitable Site material such as clays susceptible to frost-heaving, silts, rock, rubble, rubbish and any surplus suitable Site material.
- E3.3.2 Do not disturb adjacent items designated to remain in place.
- E3.3.3 Disposal of material shall be understood to mean the hauling of all unsuitable material from the Site and the unloading in a legal manner acceptable to the Contract Administrator. If arrangements are made in advance excavated material may be disposed of on Site at a location designated by the Contract Administrator.

- E3.3.4 Contractor must coordinate with the Contract Administrator to ensure all removals have occurred.
- E3.3.5 Excavation should be coordinated with the installation paths and sodding so as not to leave an open excavation area subject to ponding water.
- E3.3.6 The Contractor must ensure that the finish grades are smooth, and do not create tripping hazards nor areas in which water will pond.
- E3.3.7 All extraneous materials are to be removed from the Site and disposed of in a safe and legal manner. 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.
- E3.3.8 Items such as excavation of existing handball court and removal of portions of asphalt pathway may require additional clean fill, either used from excavated areas within the site or brought to the site. The cost of additional clean fill shall be incidental to the Excavation & Grading price of the item.
- E3.3.9 The Contractor shall construct the Site within the limits indicated to the design elevations and gradients noted on the Drawings, less the appropriate surface treatment depths specified and shall excavate, remove and dispose of all unsuitable materials of whatever nature encountered.
- E3.3.10 The Contractor shall restrict his activities strictly to within the limits of the Work, unless receiving prior written approval from the Contract Administrator. The Contractor shall take all precautions to prevent damage to traffic structures, pole lines, existing trees, Site services and adjacent property and he shall be liable for any damages occurring in the performance of this Work.
- E3.3.11 Contractor shall examine the Site and make themselves familiar with the existing conditions and the nature of the Work to be done.
- E3.3.12 Except for drainage swales, berms and embankments indicated, the design gradient for all other areas shall be considered to be straight grade between the design elevations shown. Changes in grade at swales, berms, embankments and field shall be gently contoured as directed by the Contract Administrator to provide future ease of grass mowing operation.
- E3.3.13 Excavate and Grade to the limits shown and as necessary to achieve finish grades that are level with surrounding areas, or as indicated on the Drawings.
- (a) Excavate area of existing asphalt pathway as indicating on Drawings. Add clean fill, if required, to level excavated area in relation to adjacent surfacing. Finish grade will be the sod level. The work and payment for the sodding shall be as per E15;
  - (b) Excavate former handball court as indicated on Drawings. Add clean fill, if required, to level excavated area in relation to adjacent surfacing. Finish grade will be the sod level. The work and payment for the sodding shall be as per E15;
  - (c) Excavate former play area as indicated on Drawings. Add clean fill, if required, to level excavated area in relation to adjacent surfacing. Finish grade will be the sod level. The work and payment for the sodding shall be as per E15;
  - (d) Excavate for new shrub beds – 350mm minimum, in accordance with Drawings, SCD-501A - and per E9;
  - (e) Excavate for granular path and seating areas – 200mm depth, in accordance with SCD-645A and Drawings and per E6;
  - (f) Excavate for new asphalt path – 275mm depth, in accordance with SCD-648 and Drawings and per E7; and
  - (g) Grading around new play area to achieve finished sod grades as per Drawing L.2-K3. The work and payment for the sodding shall be as per E15;
- E3.4 Method of Measurement and Basis of Payment

**E3.4.1** Method of Measurement shall be as follows:

- (a) Excavation and Grading shall be measured on a cubic metre basis for:
  - (i) "Excavate, legally dispose existing asphalt pathway";
  - (ii) "Excavate, legally dispose existing asphalt handball court"; and
  - (iii) "Excavate and legally dispose of existing sand surfacing"; on Form B: Prices.
- (b) Excavation and Grading shall be measured on a Square Metre basis, as accepted by the Contract Administrator for "Grading around New Play Area" on Form B: Prices.
- (c) No measurement will be made for the Excavation and Disposal for shrub beds, as these items are incidental to E9;
- (d) No measurement will be made for the Excavation and Disposal for the granular path and seating area as these items are incidental to E6;
- (e) No measurement will be made for the Excavation and Disposal for asphalt path, as these items are incidental to E7.

**E3.4.2** Basis of Payment shall be as follows:

- (a) Excavation and Grading will be paid for at the Contract Unit Prices on Form B: Prices. The amount to be paid for shall be the total number of units, measured as specified herein, which price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- (b) No payment will be made for the Excavation and Disposal for shrub beds, as these items are incidental to E9;
- (c) No Payment will be made for the Excavation and Disposal for the granular path and seating area as these items are incidental to E6;
- (d) No payment will be made for the Excavation and Disposal for asphalt path, as these items are incidental to E7.

**E4. SUB-SURFACE DRAINAGE**

**E4.1** Description

**E4.1.1** This Work shall consist of providing and placing a geocomposite prefabricated drain system as described in the plans. The drainage system shall be installed in accordance with these specifications and in close conformity with the locations and dimensions as shown on the plans or specified by the Contract Administrator. The quantities of drain as shown on the plans 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.

**E4.1.2** This Work shall include two (2) different applications:

- (a) Subsurface drainage under the granular pathway, so the pathway does not block the movement of water from the one area to another; and
- (b) Subsurface drainage outside the timber edging, between the edging and the berm in a trench. This drainage pipe will extent from the berm and edge of timber edging, under a second path and end with an emitter.

**E4.2** Material

**E4.2.1** Drainage pipe will be Multi-Flow or approved substitute in accordance with B6. Drainage pipe will 150 mm (6"). The manufacturer will size and approve all fittings for use with Multi-Flow or approved substitute drainage pipe.

**E4.2.2** The drain conduit shall be of flexible, prefabricated, rounded rectangular shaped, composite product. The drain conduit will be wrapped with a non-woven geotextile and will be a non-woven needle-punched construction and consist of long-chain polymeric fibres

composed of polypropylene, polyethylene or polyamide. The fibres will 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 will be free of any chemical treatment or coating, which reduces permeability and will be inert to chemical commonly found in soil. The geotextile will 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 <sup>2</sup>	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

E4.2.3 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
Flow Rate, gpm/ft <sup>***</sup>	ASTM D-4716	30
Compressive Strength, psf	ASTM D-1621 (modified sand method)	6000
Pipe Stiffness, pii	ASTM D-2412	100

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

E4.2.4 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.

E4.2.5 Drainage pipe shall be Multi-Flow or approved substitute in accordance with 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.

E4.2.6 Where specified the emitter shall be NDS #620 or approved substitute in accordance with B6.

E4.2.7 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.

E4.2.8 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.

#### E4.3 Construction Methods

E4.3.1 Installation of Subdrain is not to proceed until after the excavation/grading has been approved by the Contract Administrator.

E4.3.2 The layout of the subdrain is to be marked on Site and approved by the Contract Administrator prior to trenching.

E4.3.3 The Subsurface drainage under the granular pathway:

- (a) shall be laid horizontally under the path to allow water to move from one area to another;
- (b) Shall be laid on the prepared surface to facilitate cross movement of water. Subdrain shall be installed below geotextile and in conformance with details provided;
- (c) Contractor is to protect subdrain from excessive weight during the duration of construction and to repair and make good any pipe collapsed prior to acceptance;
- (d) Fittings for the drain will be installed in accordance with the manufacturer's recommendations and Specification.

E4.3.4 The Subsurface drainage outside the timber edging, between the edging and the berm:

- (a) shall be laid vertically within a trench and attach to an emitter;
- (b) 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;
- (c) 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;
- (d) 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;
- (e) Contractor is to maintain top surface of the backfilled sand even with the surrounding grade during the grow in phase.

E4.3.5 Fittings for the drain shall be installed in accordance with the manufacturer's recommendations.

E4.3.6 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.

E4.3.7 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.

#### E4.4 Measurement and Payment

E4.4.1 Method of Measurement shall be as follows:

- (a) Sub-surface drainage shall be measured on a linear metre basis for:
  - (i) "Supply and Install Subsurface drainage under the granular pathway"; and

- (ii) "Supply and Install Subsurface drainage in trench, including emitter" on Form B: Prices.

E4.4.2 Basis of Payment Shall be as follows:

- (a) Subsurface Drainage will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated 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.
- (b) This payment shall be understood to include all trenching, backfill, fittings, cleanouts, topsoil and seeding/sodding, and items incidental to the Work included in the Specification.

**E5. SITE LIGHTING**

E5.1 Description

E5.1.1 This Specification shall cover the furnishing of labour, new material, equipment and services necessary for the complete installation of Site Lighting, the replacement of existing park lighting heads and poles, as well as the relocation of existing park lighting, as shown on Drawing L.2-K2.

E5.1.2 For the establishment or relocation of a new light within the park, the major components of the work involved, but not limited to are:

- (a) Connection to Power Supply and Co-ordination with Manitoba Hydro;
- (b) Trenching and Installation of Conduit & Electrical Conductor Cable ;
- (c) Pole Installation (Including Concrete Base); and,
- (d) Lighting Fixture, mounting, attachments and lamps.

E5.1.3 In the case of a relocated or removed light the existing concrete base shall be removed as per E2, and shall be paid for within the relocation of the light.

E5.1.4 For the upgrading/refurbishment of the existing park lights, the major components of the work involved, but not limited to are:

- (a) Removal of Existing Pole, Lighting Fixtures, attachments and lamps;
- (b) Pole Installation; and,
- (c) Lighting Fixture, mounting, attachments and lamps.

E5.2 Materials

E5.2.1 The Contractor shall supply and install site lighting as shown on Construction Drawings and according to specifications listed below

- (a) Light Pole shall be 4.57 m (15') high, 127 mm (5") round, steel, and powder coated same colour as luminaire; and,
- (b) Luminarie shall be as follows:
  - (i) Prisma by SDL

MODEL	IES DISTRIBUTION	WATTAGE	COLOUR	CAGES
VP 80	LR5	150 S	Black	8 Guards

- (c) Photocell location shall be on light pole as determined on site prior to installation

E5.3 Construction Methods

E5.3.1 Electrical Contractor is to provide CSA approved wiring in accordance with the Canadian Electrical Code.

- E5.3.2 Electrical installation shall be done in accordance with the current edition of the Canadian Electrical Code, Provincial, and Municipal and other codes and regulations. Municipal and Provincial codes and regulations will take precedence over all other codes.
- E5.3.3 Grounding shall be done in accordance with the latest edition of the Canadian Electrical Code.
- E5.3.4 Contractor is to coordinate with Manitoba Hydro to determine the required service for new lighting and provide service in conjunction with Manitoba Hydro. Make all arrangements with Manitoba Hydro and pay all associated costs.
- E5.3.5 Prepare and submit to the proper authorities all necessary permits and pay all fees.
- E5.3.6 Upon completion and before final payment is made, present to the City's Contract Administrator a Certificate of Approval for all electrical work for the inspection of the department having jurisdiction.
- E5.3.7 The Electrical Contractor shall guarantee the satisfactory operation of all work and apparatus included and installed under this section of the Specification for a period of 12 months.
- E5.3.8 Conduits in direct contact with earth or in concrete shall be 50 mm low-density black polyethylene.
- E5.3.9 Install designatory lettering on all electrical equipment
- E5.3.10 Fixtures are to be installed to manufacturer's specifications.
- E5.3.11 Structural Foundation to be installed as per SCD-652.
- E5.3.12 Wire and cable shall be copper of standard AWG sizes with 600V(90 Degree C) insulation. Insulation shall be X-Link Polyethylene unless otherwise noted on drawings or prohibited by regulations. Aluminium conductors will not be accepted. Minimum wire size shall be # 10 AWG.
- E5.4 Method of Measurement and Basis of Payment
- E5.4.1 Method of Measurement Shall be as follows:
- (a) The supply and installation of Site Lighting will be measured on a per unit basis for, "Supply and Install NEW Park Lighting";
  - (b) "Supply and Install VP-80 Style Head and pole on Existing Concrete Bases"; and
  - (c) "Remove existing motion light & concrete base & relocate on new base in new location" on Form B: Prices.
- E5.4.2 Basis of Payment Shall be as follows:
- (a) The supply and installation of New Park Lighting 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, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator. Price shall be payment in full for the work to be completed, including:
    - (i) Co-ordination with Manitoba Hydro and hooking up to power supply. Supply of all materials and performing all operations herein described and for all other items incidental to the work included in this Specification.
    - (ii) Supply and Installation of all Underground Electrical trenching, conduit and cable. Supply of all materials, trenching, conduit and cable installation, wiring, backfilling, sod restoration and performing all operations herein described and for all other items incidental to the work included in this Specification.
  - (b) The Supply and Installation of the lighting shall include; the luminaire, light standard, structural foundation, base plate, photo-cell, anchors bolts, all fasteners and applicable electrical work. Price shall be payment in full for supply of all materials and



performing all operations herein described and for all other items incidental to the work included in this Specification.

## **E6. GRANULAR PATH AND SEATING AREA**

### **E6.1 Description.**

E6.1.1 This Specification shall amend and supplement the City of Winnipeg Specification CW 3110-R11. The Work to be done by the Contractor under this Specification shall cover all phases of supply and placement of crushed limestone surfacing materials necessary to install Granular Path and Seating Areas as shown on Drawing L.2-K2.

### **E6.2 Materials**

E6.2.1 The Granular Path and Seating Areas shall consist of a 150 mm base coarse depth of 50 mm diameter crushed limestone down, with a 50 mm depth of 20 mm diameter crushed limestone capping, see "Park Path – Crushed Limestone" on SCD-645A.

E6.2.2 The separation/reinforcement geotextile fabric shall conform to the Products Approved as listed in City of Winnipeg Specification for Approved Products for Surface Works.

### **E6.3 Construction Method**

E6.3.1 The Work included in the establishment of the Granular Path and Seating area shall include:

- (a) The Contractor shall survey and stake out the proposed Granular Path and Seating Area(s) prior to the start of construction as shown on the construction drawings. Layout of expanded Seating Area shall be checked and confirmed with Contract Administrator prior to construction.
- (b) Excavation, rough grading, and any addition of fill necessary for Granular Path and Seating Areas shall be as per E2.
- (c) Subgrade to be compacted.
- (d) Separation/Reinforcement geotextile fabric shall be installed as outlined in CW 3110 - item 3.1 "Separation/Reinforcement Geotextile Fabric".
- (e) All granular base coarse shall be placed and compacted to the finished thickness as specified on the drawings.
- (f) Base Coarse and Capping Coarse shall be compacted to a minimum of ninety five percent (95%) of Standard Proctor Density.

### **E6.4 Method of Measurement and Basis of Payment**

E6.4.1 Method of Measurement shall be as follows:

- (a) Granular Path and Seating Area shall be measured on a square metre basis for: "Supply/Install Granular Pathway and Seating Areas" on Form B: Prices.

E6.4.2 Basis of Payment shall be as follows:

- (a) Gravel Path and Seating Area shall be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for excavation, subgrade compaction, supply and installation of base coarse and top coarse, 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. ASPHALT PATH**

E7.1 This specification shall cover the supply and installation of an asphalt path.

E7.2 Excavation

#### E7.2.1 Description

- (a) This specification shall be done in accordance the City of Winnipeg's Standard Construction Specification CW 3110-R7 – “Sub-Grade, Sub-Base and Base Course Construction” and as per SCD-648.
- (b) Excavation shall be understood to include all removal of existing insitu material necessary to achieve finished grade and as indicated on Drawing L.2-K2, all in accordance with E2.

#### E7.2.2 Construction Methods

- (a) Excavation shall be performed as outlined in CW 3310 –R7 – Item 3.2 – “Excavation”.
- (b) If any pavement exists at the limits of the designated area of removal, these shall be saw cut for the full depth of the pavement prior to the demolition and removal operations. All costs in connection with saw cutting are incidental and shall be included in the unit price bid for excavation.
- (c) All excavated material shall be removed, hauled and disposed of off-site to the satisfaction of the Contract Administrator.

#### E7.3 Sub-Grade Compaction

##### E7.3.1 Description

- (a) Sub grade compaction shall be done in accordance with City of Winnipeg's Standard Construction Specification CW 3110-R7 - “Sub-Grade, Sub-Base and Base Course Construction”.

##### E7.3.2 Construction Methods

- (a) Sub-grade compaction shall be performed as outlined in CW 3110 – R7 – item 3.3 – “Preparation of Sub-Grade and Placement of Sub-Base material.
- (b) Sub-grade shall be free of any fibrous organics, softened and disturbed soil. The prepared sub-grade shall be proof rolled with a heavy sheep’s foot roller (min 25 passes) and inspected by the Contract Administrator to detect for any soft spots prior to the placement of overlying granular fills.

#### E7.4 Geotextile Fabric

##### E7.4.1 Description

- (a) Geotextile Fabric shall be placed in accordance with City of Winnipeg's Standard Construction Specification CW 3130 – “Supply and Installation of Geotextile Fabrics”.

##### E7.4.2 Materials

- (a) The separation/reinforcement geotextile fabric shall conform to the Products Approved as listed in City of Winnipeg Specification for Approved Products for Surface Works.

##### E7.4.3 Construction Methods

- (a) Separation/Reinforcement geotextile fabric shall be installed as outlined in CW 3110 - item 3.1 “Separation/Reinforcement Geotextile Fabric”.

#### E7.5 Crushed limestone sub-base course material

##### E7.5.1 Description

- (a) Crushed limestone sub-base material shall be supplied and installed in accordance with City of Winnipeg's Standard Construction Specification CW 3110-R7 - “Sub-Grade, Sub-Base and Base Course Construction”.

#### E7.6 Materials

- (a) Crushed Limestone sub-base material shall be 50 mm (2”) as specified and to the depth of 150 mm (6”) as shown on the drawings.

E7.6.2 Construction Methods

- (a) Crushed limestone sub-base material shall be supplied and installed as outlined in CW 3110 –R7 – item 3.4 “Placement of Sub-Base Material with Geotextile Fabric”.
- (b) All limestone sub-base material shall be placed and compacted as specified to a finished thickness as shown on the drawings.

E7.7 Crushed Limestone Base Course Material

E7.7.1 Description

- (a) Crushed limestone base material shall be supplied and installed in accordance with City of Winnipeg’s Standard Construction Specification CW 3110-R7 - “Sub-Grade, Sub-Base and Base Course Construction”.

E7.7.2 Materials

- (a) Crushed Limestone base coarse material shall be 20 mm (3/4”) as specified and to the depth of 50 mm (2”) as shown on the drawings.

E7.7.3 Construction Methods

- (a) Crushed limestone base coarse material shall be supplied and installed as outlined in CW 3110 –R7 – item 3.5 “Placement of Base Course Material “.
- (b) All limestone base coarse shall be placed and compacted as specified to a finished thickness as shown on the drawings.

E7.8 Asphaltic Pavement

E7.8.1 Description

- (a) Asphaltic Concrete shall be supplied and installed in accordance with City of Winnipeg Standard Construction Specification CW 3410-R5 – “Asphaltic Concrete Pavement Works”.

E7.8.2 Materials

- (a) Asphaltic Concrete shall be Type 1A as specified and to a thickness of 75 mm (3”) as shown on the drawings.

E7.8.3 Construction Methods

- (a) Asphaltic Concrete shall be supplied and installed in accordance with the lines, grades and thickness shown on the Construction Drawings and to City of Winnipeg Standard Construction Specification CW 3410-R5. Asphalt shall be placed in one lift.

E7.9 Crack Sealing

- (a) As a warranty requirement, the Contractor shall rout and seal any and all cracks which may appear during the one-year warranty period. Crack sealing shall conform to the requirements of City of Winnipeg Standard Construction CW 3250 – R3.
- (b) No separate payment will be made for this item as it is considered a warranty issue and shall fall under G.C. 13 – Warranty.

E7.10 Quality Control for Hard Surfaced Areas

- (a) Further to Section 10, Quality Control, of CW 3110-R5 and CW 3410-R5, the Contract Administrator may obtain a qualified independent testing lab to conduct tests on materials to determine the acceptability of the sub-grade, sub-base, base course and asphaltic concrete as placed by the Contractor in accordance with the requirements of this Specification.
- (b) The Contractor shall not proceed with each granular fill placement or asphalt installation until test results have been reviewed and the approval to proceed is granted by the Contract Administrator.

- (c) The Contract Administrator will conduct a survey of the operation to verify installation of specified layer thickness.
- (d) Non-conformity with the specified test requirements or compacted layer thickness will constitute sufficient grounds for rejection of the Work.

**E7.11 Method of Measurement and Basis of Payment**

**E7.11.1 Method of Measurement shall be as follows:**

- (a) Asphalt Path will be measured on a square metre basis for: "Supply and install asphalt path" on Form B: Prices.

**E7.11.2 Basis of Payment shall be as follows:**

- (a) Asphalt Path 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, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

**E8. SITE FURNITURE**

**E8.1 Description**

- E8.1.1 This specification shall cover the supply and installation of three (3) metal slat waste receptacles, one (1) park sign and four (4) benches each w/ three (3) arms.
- E8.1.2 The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work as shown on Drawing L.2-K2 and specified herein. Supply includes pick up and payment from source identified below.

**E8.2 Materials**

- E8.2.1 All materials supplied under this specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.

**E8.2.2 Site Furniture shall be:**

- (a) Waste Receptacle – Metal Slat Type, as per SCD-119, Product #52501062, or substitute approved in accordance with B6.
- (b) Park Sign, as per SCD-717A, order from Contact below, with park name listed as: "Lizzie Playground".
  - (i) Contact for Waste Receptacle and Park Sign:  
Aaron Lennon  
Supervisor of Central Repair/Manufacturing Facility  
City of Winnipeg  
Fleet Management Agency Division  
Public Works Department  
215 Tecumseh St  
Winnipeg. MB R3E 3S4  
Telephone No. (204) 986-5505  
Facsimile No. (204) 986-1248
- (c) Benches: Cascade Contour Benches, 72" long, brown recycled plastic (#232), with inground mounting and three (3) armrests, or approved equal in accordance with B6.
  - (i) Contact for Benches:  
Playgrounds-R-U's  
250 Transport Rd.  
Box 7, Grp. 582, R.R. #5

Winnipeg, MB R2C-2Z2

Ph: (204) 632-7000

Fax (204) 632-7421

**E8.3 Construction Methods**

- (a) All Work is to be located and installed in accordance with the Drawings L.2-K2, SCD-119, SCD-717A, and following manufacturers instructions, using approved non-rusting, vandal resistant fasteners to ensure solid, durable, finished work suitable for the purpose intended. Fasteners and assembly hardware shall be incidental to the Work;
- (b) All furnishings and fixtures 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 site furnishings with Contract Administrator prior to installation;
- (c) All furnishings and fixtures to be carefully handled so that no parts will be bent, broken or otherwise damaged. Hammering is prohibited;
- (d) Install as per manufacturer's instructions and the attached drawings.

**E8.4 Method of Measurement and Basis of Payment**

**E8.4.1 Method of Measurement shall be as follows:**

- (a) Site Furniture will be measured on a per unit basis for the following items:
  - (i) "Supply and Install metal slat waste receptacle",
  - (ii) "Supply and Install new Park Sign", and;
  - (iii) "Supply and Install cascade bench w/ 3 armrests", on Form B: Prices.

**E8.4.2 Basis of Payment shall be as follows:**

- (a) Site Furniture will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated 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.

**E9. SHRUB BED**

**E9.1 Description**

- (a) This specification shall cover shrub bed installation.
- (b) The City reserves the right to reduce the area of shrub beds installed in order to meet the budgetary constraints.

**E9.2 Materials**

**E9.2.1 Topsoil Mix**

- (a) Planting soil shall consist of black top soil, a fertile friable natural loam containing by volume not less than 4% and no more than 25% of organic matter for clay loams, and not less than 2% and no more than 25% for sandy loams, with an acidity value ranging from pH 6.0 to 8.0 and capable of sustaining vigorous plant growth. Topsoil is to be free of any mixture of subsoil, clay lumps and free of stones and other extraneous matter. It shall not contain couch or crab grass rhizomes.

**E9.2.2 Woodchip Mulch shall be in accordance with E12.**

**E9.3 Construction Methods**

**E9.3.1 General**

- (a) Area of shrub bed as per Drawing L.2-K4 and Drawing L.2-K5 and shall be excavated as per E2. Planting bed shall be excavated with vertical sides and material removed to a minimum depth of 350mm in area indicated on Drawings L.2-K4 and SCD-501A.

- (b) Limestone rocks are to be placed within shrub beds as per E11. Do not prepare shrub beds directly underneath where limestone rocks are to be placed.

#### E9.3.2 Installation

- (a) Excavation shall be in accordance with E2.
- (b) New Planting Beds to be excavated as per Drawing L.2-K4. Upon excavation of the planting bed, the excavation shall be backfilled with a topsoil mixture to a depth to permit adequate installation and stabilization of the plant material. Topsoil shall be placed in accordance with City of Winnipeg Standard Construction Specification CW 3540-R5 and SCD-501A to a 400mm depth.

#### E9.4 Method of Measurement and Basis of Payment

##### E9.4.1 Method of Measurement shall be as follows:

- (a) Shrub Bed Preparation will be measured on a per square metre basis for "Shrub Bed Preparation" on Form B: Prices. This price shall be payment in full including all costs for the excavation of the planting bed and installation of the topsoil.

##### E9.4.2 Basis of Payment shall be as follows:

- (a) Shrub Bed Preparation 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, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- (b) The supply, hauling and installation of wood chip mulch shall be paid for in E12.

### **E10. PLANT MATERIAL**

#### E10.1 Description:

- (a) This specification shall cover the supply and installation of nursery grown shrubs.
- (b) The City reserves the right to reduce the quantity of shrubs in order to meet the budgetary constraints.

#### E10.2 Materials

##### E10.2.1 General

- (a) 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".
- (b) 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.
- (c) 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.
- (d) 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.
- (e) Plants larger than specified may be used if approved by the Contract Administrator. The use of such plants shall not increase the Contract price.

- (f) 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.
- (g) 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 scare to the bark. All parts of the nursery stock shall be moist and show live, green cambium when cut.
- (h) At least one plant of each variety supplied shall bear a tag showing both the botanical and common name of the plant.

#### E10.2.2 Protection of Stock

- (a) 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.
- (b) 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.

#### E10.2.3 Wound Dressing

- (a) Horticulturally accepted non-toxic, non-hardening emulsion. Wound Dressing must be approved by Contract Administrator.

### E10.3 Construction Methods

#### E10.3.1 General

- (a) Planting pits shall be excavated in a square shape with vertical sides to a depth and a minimum width amounting to twice the diameter of the root system, as per drawing SCD-501A. The excavated pits shall be refilled with backfill mix as per E9. Hand dig pits where required to protect underground utilities and tree roots.

#### E10.3.2 Installation

- (a) Upon excavation of the 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) After inserting the plant and filling the planting hole with topsoil, water shall be poured in until the pit is thoroughly soaked. Filling of the hole shall then be completed and the fill-in soil shall be packed firmly around the roots, leaving a concave surface for convenient watering 75 mm below rounding and grade elevation. After filling, the planting shall be watered at frequent intervals.
- (c) 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.
- (d) Nursery stock shall be faced to give the best appearance or relationship to adjacent structures and to the approval of the Contract Administrator.

### E10.4 Guarantee of Nursery Stock

- E10.4.1 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.

- (a) Exempted is nursery stock damaged by accidental causes or vandalism, which stock shall be replaced at the cost of the City.
- (b) 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 period. All plants must be in a healthy condition for a full two years before the warranty on the year will be considered fulfilled.

**E10.5 Method of Measurement and Basis of Payment**

**E10.5.1 Method of Measurement shall be as follows:**

- (a) The supply and installation of Plant Material will be measured on a per unit basis for "Supply and Install Shrubs" on Form B: Prices.

**E10.5.2 Basis of Payment shall be as follows:**

- (a) The supply and installation of Plant Material will be paid for at the Contract unit price for each shrub, measured as specified herein, which price shall be payment in full including all costs for the shrub, two year maintenance, and all other items incidental to the Work included in this Specification.
  - (i) Species and quantities as noted in Unit Price Forms.

**E10.6 Plant List**

Quantity	Common Name/botanical name	Size / Remarks
19	Miniglobe Honeysuckle / <i>Lonicera xylosteoides</i> "miniglobe"	2 gal. Specimen quality.
27	Blue Fox Willow / <i>Salix brachycarpa</i> "Blue fox"	2 gal. Specimen quality.

**E11. LANDSCAPE ROCK**

**E11.1 Description**

- E11.1.1 This specification shall cover the supply and installation of limestone rocks as indicated on the Drawings.

**E11.2 Materials**

**E11.2.1 Geotextile Fabric**

- (a) Filter cloth shall be Pro Pex 4530 polypropylene non-woven needle punched fabric.

**E11.2.2 Limestone Rock**

- (a) Limestone rock to be from a Manitoba quarry, colour to be approved by Contract Administrator. Rock to be rough cut, irregular shaped with an approximate size range of:
  - (i) Small limestone boulders:
    - ◆ 350mm-450mm Outside Dimensions: 30%
    - ◆ 550mm-600mm Outside Dimensions: 70%
  - (ii) Large limestone boulders:
    - ◆ 1050-1200mm x 500-600mm x 500-600mm: Count – 6

**E11.3 Construction Methods**

**E11.3.1 General**



- (a) Limestone rocks to be placed in a random organization within the shrub beds as indicated in Drawings. Unsuitable subgrade material to be disposed of as directed by Contract Administrator.

E11.3.2 Installation

- (a) Supply and Installation of Geotextile as per Drawings. The cost to supply and install geotextile is incidental to the Work in this section.
- (b) Excavate and backfill with compacted granular base around boulders. Tamper down in 150mm lifts and compact to 95% SPD. Supply and Installation of granular base is incidental to the Work in this section.

E11.4 Method of Measurement and Basis of Payment

E11.4.1 Method of Measurement shall be as follows:

- (a) The smaller limestone boulders shall be measured on a square metre basis for:
  - (i) "Supply and Install small irregular shaped limestone boulders" on Form B: Prices.
- (b) The larger limestone blocks shall be measured on a per unit basis for:
  - (i) "Supply and Install large irregular shaped limestone blocks" on Form B: Prices.

E11.4.2 Basis of Payment shall be as follows:

- (a) Supply and Installation of the limestone rocks will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated 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. WOODCHIP MULCH**

E12.1 Description

- E12.1.1 This specification shall cover the supply and installation of Woodchip Mulch to be placed within the existing shrub beds and within the tree pit, as shown on Drawing L.2-K4.

E12.2 Materials

- (a) Mulch is to be a clean bark or wood chip mulch with chips not less than 15mm nor larger than 75mm in size and not more than 20mm thick. Mulch is to be free of leaves, branches and other extraneous matter.

E12.3 Construction Methods

E12.3.1 Installation

- (a) Woodchip Mulch shall be installed within the shrub beds and within tree pit, as shown on Drawing L.2-K4 to a minimum depth of 100mm.

E12.4 Method of Measurement and Basis of Payment

E12.4.1 Method of Measurement shall be as follows:

- (a) The supply and installation of Woodchip Mulch shall be measured on a per square metre basis for "Supply and Install wood chip mulch" on Form B: Prices.

E12.4.2 Basis of Payment shall be as follows:

- (a) The supply and installation of Woodchip Mulch 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, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

## **E13. POST AND CHAIN BOLLARD FENCE**

### **E13.1 Description**

E13.1.1 This Specification will cover the supply and installation of a post and chain bollard fence as shown on the drawings. This specification will cover supply and installation of all labour, materials, equipment and services necessary for the supply and installation of a post and chain bollard fence as shown on the drawings.

### **E13.2 Materials**

- (a) Bollard posts shall be Western Red Cedar, free of bark, solid core, air dried, pentachlophenol dipped after shaping and drilling- or Manitoba Pine, free of bark, solid core, rough not turned and boliden treated under pressure.
- (b) Bollard post shall be to the size and dimensions as indicated on the construction drawings.
- (c) Chain shall be galvanized 6 mm (1/4") chain.

### **E13.3 Construction Methods**

#### **E13.3.1 Installation**

- (a) Post fencing and bollards shall be installed true and plumb.
- (b) Tops of fence posts shall follow final site grades.
- (c) Backfill post holes and bollard excavations with 20mm granular material. Tamp material thoroughly.

### **E13.4 Method of Measurement and Basis of Payment**

#### **E13.4.1 Method of Measurement shall be as follows:**

- (a) Measurement and Payment for post and chain bollard basis will be on lineal metre basis paid for at Contract Unit Price per lineal metre for "Supply and Install post and chain fencing" on Form B: Prices.

#### **E13.4.2 Basis of Payment shall be as follows:**

- (a) Post and Chain fencing will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated 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.

## **E14. CHAIN LINK FENCE GATE**

### **E14.1 Description**

E14.1.1 This specification shall cover the removal of a portion of existing chain link fence and the installation of a new chain link fence gate and amends C.W. 3550-R2 Chain Link Fencing.

E14.1.2 The contractor shall remove portion of existing chain link fencing for insertion of new chain link gate as indicated on Drawing L.2-K2. Any materials that are deemed to be in good working condition should be re-used where appropriate.

E14.1.3 All existing fence posts which are removed shall have the holes backfilled with compacted sand to 150mm below finish grade. Fill balance of hole with topsoil and seed/sod as specified.

### **E14.2 Method of Measurement and Basis of Payment.**

#### **E14.2.1 Method of Measurement shall be as follows:**

- (a) The supply and installation of chain link gate shall be measured on a lump sum basis for "Supply and Install chain link fence gate w/ padlock" on Form B: Prices.

E14.2.2 Basis of Payment shall be as follows:

- (a) Chain link fence gate will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated 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.

## **E15. SODDING AND SEEDING**

E15.1 Description

E15.1.1 This Specification shall amend and supplement the City of Winnipeg Specifications CW 3510-R8, CW 3520-R5 and CW 3540-R4. The Contractor shall install mineral sod or seed and a minimum 75mm (for sod) or 100mm (for seed) compacted thickness of topsoil, as required.

E15.1.2 Path areas: The Contractor shall install topsoil and sod around the perimeter of newly constructed paths and sitting area to clean up turf disturbed by the Work, if necessary.

E15.1.3 Damaged areas: Restoration of damaged areas other than as outlined above shall be incidental to the Work. No separate payment shall be made. Restoration shall be achieved using seed and topsoil unless otherwise directed by the Contract Administrator.

E15.1.4 Thirty (30) day maintenance period on sod will commence at Total Performance and acceptance.

E15.2 Method of Measurement and Basis of Payment

E15.2.1 Method of Measurement shall be as follows:

- (a) Sodding will be measured on a square metre basis for:
  - (i) "Supply and Install soil and sod" on Form B: Prices.

E15.2.2 Basis of Payment shall be as follows:

- (a) Sodding and Seeding will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated 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.